Next Week—Big 86-Page Show Issue

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Tyler Uses Show To Introduce '61 Products

By Frank J. Versagi

SOUTH BEND, Ind.—For the first time in its history, Tyler Refrigeration Corp., Niles, Mich., used sales meeting professionals to plan and stage the introduction of its new products during an International Sales Congress held here recently.

During most of the three-day session, Tyler personnel were actors in a script prepared by E. F. MacDonald Co. of Chicago.

The new products introduced were:

—A service meat and delicatessen case with top-mounted gravity coil.

—Low temperature and normal temperature island display cases.

—A multi-shelf produce case

(Continued on Page 25, Col. 4)

Airtemp Beefs Up '61 Room Unit Line

DAYTON—A new series of models which combine an unusual type of decorator panel and a "different" method of air distribution, plus an extension of high-end models to new high capacities, marks the 1961 line of Chrysler Airtemp room air conditioners.

Also introduced was a simple, fast and weather-tight window installation kit, for use with a standard sized cabinet that will be used on the majority of units in the room air conditioner line. The window-mounting kith can be installed in three minutes, it was stated by Thomas W. Kirby,

(Continued on Page 25, Col. 1)

Heat Pump Attaches To Home Wall

CHICAGO — A radically different heat pump package introduced by Westinghouse for the low cost mass home market may also broaden applications in the commercial field, company officials believe.

The new "WhispAir" unit attaches directly to the outside wall of the home, thus greatly reducing the time and cost of installation and cutting the interior noise level, explained Raymond K. Serfass, manager of the company's air conditiong division, in announcing the new product at the opening of the Home Builders show here.

Measuring approximately 6 ft high, 2 ft wide, and 1 ft deep, the air-to-air unit is rated at 18,000 Btu on cooling and 17,000 Btu on heating.

Models of greater capacity may be introduced in the future, it was indicated. Shipments of this unit, designated at model HB18A, are scheduled to begin in mid-February.

Although intended primarily for homes, "the new unit is equally suited to a variety of other applications including offices, mobile homes, motels, apartments, stores, factories, and gas stations, for example," Serfass said. "Field tests in Miami, Tampa, St. Petersburg, New Orleans, Phoenix, and Los

(Continued on Back Page, Col. 1)

Exposition, Conventions Draw Industry to Chicago Feb. 11-16

* * *

ARW

At Pick-Congress

CHICAGO — As a result of expressed member preference for tying in ARW conventions with industry shows, the 26th annual convention of the Air Conditioning & Refrigeration Wholesalers will be held at the Pick-Congress hotel Feb. 11-13.

The convention immediately precedes the 15th International Heating & Air-Conditioning Exposition to be staged at the International Amphitheatre.

At the convention, members will be presented with a number of constitutional changes, according to William C. Miesse-

(Continued on Page 25, Col. 5)

Morrison Accepts Kennedy Challenge

BUFFALO, N. Y. — "O. K. Mr. Kennedy, MOR-SUN Volunteers."

In a half-page advertisement in the *New York Times* of Sunday, Jan. 29, Morrison Steel Products Inc. accepted the challenge issued by President John F. Kennedy in his inaugural address, "Don't Ask America what she can do for

(Continued on Page 4, Col. 1)

* * *

ASHRAE

At Conrad Hilton

CHICAGO — The four-day semiannual meeting of the American Society of Heating, Refrigerating & Air-Conditioning Engineers, to be staged in the Conrad Hilton hotel here Feb. 13-16, will include four technical sessions, six symposiums, and six forums.

Also scheduled are the annual luncheon, banquet, and side trips

First and second technical sessions and a symposium will get under way simultaneously at 9:30 a.m. Monday, Feb. 13, following general assembly at 9 a.m. The second technical session will be devoted to insulation. The symposium will cover frozen food handling.

On Tuesday morning there will be a technical session on refrigeration and, at the same

(Continued on Page 4, Col. 5)

Hoffmann Gets New Carrier Post

SYRACUSE, N. Y. — Hermann C. Hoffmann has been named to the new post of general sales manager of Carrier Air Conditioning Co. by Russell Gray, president.

The company was formed earlier this year by the merger of two divisions, one handling products sold through dealers, and the other larger equipment sold directly to contractors.

In addition, John F. Kooistra has been appointed manager of district sales; and George T. Long, manager of distributor sales.

John F. Manion, formerly

(Continued on Page 4, Col. 5)

Bryant Sales Force Sees Eight Lines

MIAMI BEACH, Fla.—Eight major new product lines were the main news at Bryant Mfg. Co.'s annual sales conference held here recently. The new products include:

A 2-ton remote air conditioner, the forerunner of a new line of up to 10 tons.

The "Weather-Probe," a "new concept in summer cooling, which results in quieter night operation of the air conditioner by automatically reducing blower speed when outdoor temperatures drop."

Factory assembled and pack-

(Continued on Back Page, Col. 4)

CHICAGO — Fifteenth International Heating & Air-Conditioning Exposition gets under way at the International Amphitheatre here at the stroke of noon on Monday, Feb. 13, and runs through Thursday.

The exposition, open by invitation and registration to the trade only, will welcome visitors from noon to 10 p.m. each day.

At latest count, some 540 exhibitors will display their newest products designed to advance the art of air conditioning, heating, ventilation, and refrigeration.

Displays will be set up to interest businessmen from all levels of the industry—manufacturers, wholesalers, contractors, engineers, salesmen, and servicemen. Users, too, will find much shown here to interest them.

Special bus service will transport visitors from loop hotels to the International Amphitheatre. One way fare will be 50 cents. Service starts at 10:30 a.m. with stops at the Sherman, Morrison, Palmer House, Congress, Sheraton-Blackstone, and Conrad Hilton hotels.

The exposition is sponsored by the American Society of Heating, Refrigerating & Air Conditioning Engineers, which is holding its semiannual meeting concurrently with the show at the Conrad Hilton hotel.

Exposition is managed by the International Exposition Co. of New York City, E. K. Stevens, manager.

NEWS To Distribute '61 Directories

AIR CONDITIONING, HEATING & REFRIGERATION NEWS and its companion publication AIR ENGINEERING will occupy Exhibit Space 342 at the International Heating & Air-Conditioning Exposition.

The 1961 AIR CONDITIONING, HEATING & REFRIGERATION DIRECTORY, a 350-page classified directory of manufacturers including listings of key personnel and trade names, will be distributed without charge to those registering at the NEWS exhibit space 342. A limited number of copies of the special Feb. 13 Show issue of the NEWS will also be distributed, and there will be displays of the various books, manuals, and reprints on engineering, service and installation, and merchandising, published by Business News Publishing Co., publisher of the NEWS and AIR ENGINEERING.

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Another Air Conditioned College!

Progress comes slowly, at first. But you can't keep a good idea down!

Several months ago this column suggested that, through air conditioning, schools and colleges could operate all-year-around, with the following salubrious results:

1. Increased enrollments could be accommodated without expensive new building programs.

2. Faculty salaries could be upped.

3. Students could arrange their programs more flexibly.

4. Taxpayers could gain relief.

5. And, incidentally, the air conditioning business would benefit.

President John Hannah of Michigan State university was the first to react—and act—favorably. Now comes President Weiman Hecks of Kalamazoo (Mich.) college.

In announcing a 12-month scheduled he stated:

"It is quicker, easier, and far less costly to install air conditioning than to erect new buildings."

How It Works

In ushering year-round operation to his 128-year-old coeducational private liberal arts school, his aim is to increase the student capacity up to 66 per cent—with no new buildings.

Beginning next Autumn, students will enroll for three 11-week quarters each year.

Vacations will be staggered, with roughly one-fourth of the students on vacation during each quarter. This means that approximately the same num-

(Continued on Page 8, Col. 1)

Nov. Shipments of Residential Gas-Fired Central Heating Units Total 93,295

NEW YORK CITY—Factory shipments of residential gas-fired central heating equipment totaled 93,295 units in November, according to Gas Appliance Manufacturers Association.

The monthly telegraphic survey of GAMA members shows that 71,100 furnaces, 11,195 boilers, and 11,000 conversion burners were dispatched by the manufacturers in the 30-day period.

In the first 11 months of 1960, the industry sent 1,104,132 pieces of gas central heating equipment to market. This included 842,700 furnaces, 134,732 boilers, and 126,700 conversion burners.

A comparison of the 1960 figures with those of the same periods of 1959, when several all-time-high records were achieved shows to some extent the impact of the slumping home construction industry on manufacturers of gas equipment, Edward R. Martin, GAMA's director of marketing and statistics, pointed out.

Shipments of furnaces totaled 988,300 units for the first 11 months of 1959 and 87,500 for the month of November. The 1960 figures were 14.7 and 18.7% less, respectively.

Gas boiler sales numbered 140,279 units in 1959's first 11 months and 12,256 in November of that year. Boiler sales during the similar periods of 1960 were down 4 and 8.7%, respectively.

Sales of conversion burners in the first 11 months and November of 1960 were 14.6 and 20.3% less than the comparable period of 1959, when unit shipments were reported at 148,400 and 13,800, respectively.

Factory shipments of both furnaces and boilers reached all-time peaks in 1959. Combined sales of the three types of central heating equipment in the first 11 months and November of 1960 were 13.5 and 17.8% below the 1,276,979 and 113,556 units reported for the same periods of 1959.

Vilter Elects Kocher

MILWAUKEE — Erich J. Kocher, chief engineer of The Vilter Mfg. Co., has been elected a director of the Milwaukee manufacturer of refrigeration and air conditioning equipment.

Emerson Electric Broadens 'Northwind' Line of Room Air Conditioners for '61

ST. LOUIS — Emerson Electric announced that it has expanded its 1961 line of "Northwind" room air conditioners to include 1½ and 2½-hp units and an economical, 1-hp, 7½-amp unit.

"While retaining many of the general design characteristics and features of last year's models, these new room air conditioners now offer a wider choice of units to fit any requirements," the company said.

"The new 1½-hp air conditioner delivers 12,000 Btu, while the 2½-hp unit delivers 22,000 Btu.

"All Northwind units have a two-speed blower, have been specially soundproofed to reduce noise level, and are easily adaptable to through-the-wall installation in new construction applications."

EMERSON ELECTRIC'S "Northwind" room air conditioner.

Also included in the Northwind line are two heat pumps, 1 hp and 2 hp, and two portable dehumidifiers, ⅙ and ⅕ hp.

List prices for the line range from $249.95 for the 1-hp, 115-volt unit to $495.95 for the 2½-hp unit. Every unit in the line carries a five-year warranty on the refrigeration system, it was pointed out.

Powers Regulator Will Sell Mosler Security Devices

SKOKIE, Ill. — The Powers Regulator Co., according to President H. C. Mueller, has consummated a sales agreement with Mosler Research Products, Inc., an affiliate of the Mosler Safe Co., for the marketing of the Mosler line of ultra sensitive electronic security devices.

Mueller stated that a definite trend exists toward the integration of security systems and other monitoring devices with the conventional climate control systems.

With this new affiliation, security and other remote monitoring devices can be included in Power's climate control systems "to provide obvious economies and the increased efficiency of completely centralized control," it was stated.

"These integrated security systems can include such functions as remote detection of fire, smoke, the malfunction of combustion equipment, overheating, freezing, sprinkler system operation, etc., as well as unauthorized intrusion into restricted areas."

Jack & Heintz Merges Into Siegler Corp.

LOS ANGELES—The merger of Jack & Heintz, Inc., into The Siegler Corp. was approved Jan. 27 by stockholders of both companies.

The merger combines Siegler's capabilities as a leading manufacturer of military and commercial electronics and aerospace components, with those of Jack & Heintz in missile, aviation, and industrial fields, forming a company with annual sales of approximately $100 million, according to a joint announcement.

Siegler's Holly-General Co. division, with offices in Pasadena and Burbank, Calif., produces heating and air conditioning equipment.

. . . I can get just the fin spacing, tonnage and CFM I want."

Now, Halstead & Mitchell gives you a choice of 6, 7, 8 or 10 fins per inch . . . makes it much easier to match a central fan-coil unit to a particular job or to meet specifications.

And look what else H&M offers: a selection of three coil face areas for each model; direct expansion or chilled water cooling coils (1 to 8 rows); hot water, standard steam or non-freeze steam heating coils (1 or 2 rows); cooling capacities of 3 to 92 nominal tons with 880 to 47,750 CFM; Turbu-Flo coils arranged for right or left-hand connections; horizontal or vertical mounting for discharge in any direction . . . and every accessory item you need to simplify your installation.

Why don't you check H&M Central System Air Conditioners? Call your wholesaler or write for Bulletin AHU-100. Halstead & Mitchell Co., Dept. A2, Bessemer Bldg., Pittsburgh 22, Pa.

AH SERIES
AIR HANDLER

HM
Halstead & Mitchell

Central System Air Conditioners · Air-Cooled Condensers · Cooling Towers · Water-Cooled Condensers

Years of experience fill these shoes

Lau craftsmen pride themselves on the high quality products they continue to produce, year after year. Although the latest and most modern manufacturing techniques have been applied at Lau to supply the increasing number of blower customers, each man is still quality conscious of his part of the overall job. It is this combination of experience, pride and manufacturing integrity that maintains Lau as a leader in the blower industry. Place a real craftsman on your production team . . . call or write Lau today.

The Lau Blower Company • Dayton, Ohio

'Mor-Sun'--

(Continued from Page 1, Col. 3)

you, instead ask what you can do for America."

Morrison's answer was to reduce the price to distributors of its "Mor-Sun" furnace and air conditioner line by 10% for six months. Isadore Morrison, president, invited other furnace and air conditioning manufacturers to follow suit.

"Mor-Sun Furnace will help get the ball rolling in the big housing program that's so vital to our nation's economy by giving up profits for six months!" the ad said.

"Mor-Sun . . . will cut its profits on every Mor-Sun furnace and air conditioner we manufacture or sell for the next six months . . . and, Mr. President, we've left nothing out!

"It's our belief that by selling heating and air conditioning at 10% off, we can help re-establish a building program; with a building program, workers are needed, money comes in, factories go back on full-scale employment, the economic and business recession is over. Yes, Mr. President, Mor-Sun volunteers!"

M. J. Kohnstamm, executive vice president, explained to the NEWS that Morrison will carry out this pledge by reducing prices to its distributors by 10% until next Aug. 1.

In so doing, he emphasized, there will be no reduction in quality of product, terms of guarantee, or anything else.

In the advertisement, Morrison, president, urged all furnace and air conditioning manufacturers to "dedicate yourself to help wipe out the economic and business recession. Let's all cut our profits by 10% for the next six months."

Kohnstamm said that Morrison got some response to this call last week and none of it negative. One manufacturer told him that he had already taken this step.

Morrison zone managers, meeting during the latter part of the week, were reported to have expressed pleasure at Morrison's pledge.

No. California RACCA And California Council To Meet In Santa Rosa

SANTA ROSA, Calif.—Sales tips, relations with manufacturers, and insurance for the installing contractor are some of the topics for the 4th annual convention of the Refrigeration & Air Conditioning Contractors Association of Northern California at Flamingo hotel here Feb. 10-11.

Quarterly meeting of the California Council of RACCA will be held at the same location Friday afternoon and evening, Feb. 10, beginning at 2 o'clock, according to State Chairman James A. Scatena. A report will be made of legislative activities in the California legislature.

M. Maroni Smith, executive secretary for RACCA-NC, said speakers for the convention program include J. W. Krall, president of McCray Refrigerator Co.; Romey Paulucci of San Francisco, owner of the meat section of Quality Foods, Inc.; and O. D. Oliphant of San Francisco, fire underwriter manager for Fireman's Fund Insurance Co.

"Corrosion." By Frank J. Versagi—50¢ each.

Get your copy Mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

H. C. Hoffmann

G. T. Long

Carrier--

(Continued from Page 1, Col. 4)

manager of distributor sales in the southeastern region with headquarters in Atlanta, comes to Syracuse as director of marketing services for Carrier Air Conditioning.

Hoffman joined Carrier in 1937. He has served as general sales manager for direct sales for the past seven years.

J. F. Manion

Kooistra has served as western regional manager at Los Angeles and more recently as director of marketing services for direct sales.

Long will supervise this distributor sales organization of Carrier Air Conditioning as well as relations with distributors. He first joined Carrier in 1929 and has served in sales executive positions in Chicago and Atlanta as well as in the Syracuse headquarters. His most recent assignment was director of marketing services for distributor sales.

Manion, who will head sales specialists, application and service engineering and distribution services, joined Carrier in 1941.

ASHRAE Program--

(Continued from Page 1, Col. 4)

time, symposium on medium temperature water heating and on air conditioning.

Two symposiums, one on ASHRAE research and technical program plans and the other on domestic refrigerator engineering, are scheduled for Wednesday morning.

A fourth technical session and a symposium on ventilation will conclude activities on Thursday morning. In all, 16 formal papers will be presented at the four technical sessions.

Two off-the-record forums will be conducted on Monday, Tuesday, and Wednesday afternoons.

The program also lists a welcome reception for 3 p.m. Sunday, a welcome luncheon Monday noon, and a cocktail party and annual banquet Tuesday.

A tour of the Dresden nuclear power station and a theater party are set for Wednesday afternoon. Also planned is a visit to Argonne Laboratory.

COMPLETENESS . . .
Progressively Engineered!

Air Control

THE NAME TO LOOK FOR IN REGISTERS, GRILLES, DIFFUSERS

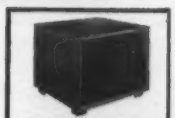
NEW "SUPER 38" PERIMETER DIFFUSER
18" long. BIG 38 inches free area. Rugged High Impact Polystyrene face. Wide spread diffusing air pattern. Decorator styling. 2-tone beige finish.
NO. 20 SERIES REGISTERS AND GRILLES
Sidewall or baseboard. 4-way control of air pattern. Positive, easy Adjusto-Stop balancing at register face. 2-tone beige finish. Full range of sizes.
NO. 188 SERIES BASEBOARD PERIMETER DIFFUSER
Finest available. Easy, fast to install. Patented Rotary Damper permits consistent air pattern. Adjusto-Stop balancing. Variety of sizes. Beige prime coat finish.

LOOK TO Air Control for QUALITY
AIR CONTROL
ROUND AND SQUARE CEILING DIFFUSERS
30% to 50% greater free area. Decorator styling. 2" width Air Flow rings deflect air along ceiling with minimum resistance. Wide outer "anti-smudge" ring. Sponge rubber gasket. Satin beige prime coat finish. Many sizes and styles.
ROUND AND SQUARE CEILING DIFFUSER DAMPERS
Rattle-free operation under extreme air velocities. Adjusto-Stop balancing at diffuser face. Unique nylon screw-type operator opens or closes dampers with ease.
NO. 170 SERIES BASEBOARD PERIMETER DIFFUSERS
Compact. Exclusive "Air-Sweep" styling. Big 34 sq. in. free area. Factory-set fins at 4 different angles. Adjusto-Stop on damper for easy balancing at face. 2-tone beige or chrome plated finish. Many sizes.
NO. 25 SIDEWALL PERIMETER DIFFUSER
Factory-set for wide fan-shaped air pattern. Fully adjustable to meet special installation requirements. Customer-approved styling. 2-tone beige finish. Baseboard type also available.
NO. 15 SERIES SIDEWALL PERIMETER DIFFUSERS
Flared top section. Curved damper. Wide fan-shaped air pattern. Modern styling. Sponge rubber gasket. In 2 sizes. Beige prime coat or metalescent finish.
NO. 150 SERIES ECONOMY FLOOR DIFFUSER
Ideal for projects or where low cost is prime factor. One piece heavy-gauge steel face. Dial operator. Adjusto-Stop balancing. Locked volume setting. Sierra-Brown enamel finish. 5 sizes.
NO. 265 SERIES BASEBOARD PERIMETER REGISTERS AND GRILLES
Low cost. 3¼" projection at base. Adjustable fins. Adjusto-Stop balancing. Easy to install. Metalescent or beige prime coat finish. Various sizes.
NO. 333 RETURN AIR GRILLES
Low cost. Exceptionally large free area. One piece heavy gauge steel construction. Metalescent or beige prime coat finish. Many sizes.
MULTI-LOUVER REGISTERS AND GRILLES
Exclusive Multi-Louver Valve provides excellent vertical control of air pattern. Low cost. Strong one piece face. Many sizes. Beige prime coat finish.
MULTI-TROL REGISTERS AND GRILLES
Features patented butterfly-type Shallo-Valve for positive air-volume control. Assures even air distribution. Advanced shallow design. Adjustable deflection bars. Available in 4-way or 2-way air pattern control. Variety of styles, sizes and types.
NO. 40 SERIES FLOOR REGISTERS
Unique design provides flat walking surface. Close mesh design. Heavy amply-spaced frets. Easy-to-operate dial operator. Variety of sizes. Oak or Metalescent finish.
NO. 42 FLOOR DIFFUSER
One-piece face. Curved adjustable vanes reduce air resistance. Streamlined valve. Extra strong construction Many sizes. Metalescent or oak finish.
SHEET METAL SCREWS
New SPEE-D hex washer head screws "drill their own hole". Cut labor cost in half. Drive chuck is key to operation. 4 sizes. 3 packs. 1 finish. Low cost sheet metal (tapping) screws also available.

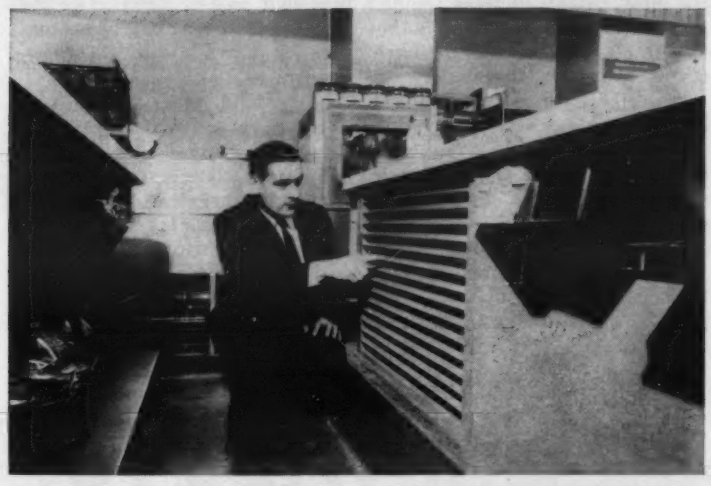
See the Air Control line of registers, grilles and diffusers at the Heating and Air Conditioning Exposition in Chicago, February 13th to the 16th. The Air Control exhibit—Booth #407—will show why Air Control is so often referred to as the most progressively engineered line in the industry. The entire line is also described in Catalog 60-AC. Write for a copy today.

AIR CONTROL PRODUCTS, INC. 361 CENTER STREET, COOPERSVILLE, MICH.

West Coast Warehouse: Leigh Industries (California), Inc., 649 S. Anderson Street, Los Angeles, California. **MADE IN CANADA BY:** Leigh Metal Products Ltd., 72 York Street, London, Ontario. **Prairie Provinces Affiliate:** Leigh-Tornel Distributors Ltd., 549 Archibald Street, St. Boniface, Manitoba.

HEAT CONTROLLER, INC.
Jackson, Mich.
Comfort-Aire

COMPRESSOR CONDENSER UNIT
AIR CONDITIONERS, HEAT PUMPS — SELF CONTAINED AND REMOTE — GAS FURNACES DEHUMIDIFIERS — ELECTRIC DUCT HEATERS — CONDENSING UNITS

Locating Return Air Grille Under Counter Saves Valuable Space In N. Y. Restaurant



JOSEPH ZAK, construction engineer for Chock Full O' Nuts restaurant points out space-saving location of return air grille for heating and cooling system.

NEW YORK CITY — The trend toward more economical and efficient use of space in restaurants is illustrated by the practice of Chock Full O' Nuts in constructing the return air grille of its heating and air conditioning system in a hollow space under the luncheon counter rather than in the wall.

Above, Joseph Zak, construction supervisor, examines facility prior to opening of new restaurant at 336 Madison Ave. An increasing number of restaurants are said to be employing this measure to utilize what otherwise would be lost space.

The air enters from ceiling outlets and is sucked into the under-the-counter space, passing down into ceiling ducts in the basement. There is no danger of customer congestion blocking the intake, it was noted.

In selecting surfacing material for the intake and its components, Chock Full O' Nuts faced a problem of combining durability with easy maintenance. An adaptation of the same material used for the counter tops, decorative plastic laminate, was specified.

J. Zicherman & Son, New York plastics fabricator, made both the $\frac{3}{8}$-in.-thick slats and the sides of the enclosure, which is 3 ft long and 2 ft thick, with gray Westinghouse Micarta laminate surfacing.

Zak pointed out that laminate can be wiped clean with merely a damp cloth and requires no special cleaning preparations or refinishing. The entire front panel, which is secured by a magnetic catch, can be removed for cleaning the interior.

Dust-Magnet Distributor Named In New York City

BROOKLYN — All Weather Air Products Co., 246 Lorimer St. here, has been appointed exclusive New York wholesale distributor for "Dust-Magnet," a permanent electrostatic filter for use in air conditioners and furnaces, it was announced.

Jack Siegel, formerly of L&P Electric Co., now partner and sales manager of All Weather, said the firm has put into effect a minimum dealer retail price policy and that Dust-Magnet and All Weather will shortly start an extensive consumer advertising program.

Grant To Cool Portions Of Toronto Hospital

TORONTO, Ont., Can. — Patients on the top floor of Goderich's Alexandra Marine and General hospital will not have to swelter next summer thanks to a $3,993 grant from The Atkinson Charitable Foundation.

The grant allows the hospital to purchase air conditioning units for nine rooms on the top floor and for the kitchen. It also underwrites the cost of a main control panel and 18 electrical outlets for patient rooms.

Cool Instruments

NEW HAVEN, Conn. — Yale university's recently-opened center for its collection of keyboard instruments is air conditioned to protect the instruments.

Industrial Research Tower Will Have Central Air Conditioning

PHILADELPHIA — A 33-story industrial research center to be built on a site adjoining the campuses of the University of Pennsylvania and Drexel Institute of Technology, will be equipped for central air conditioning.

The skyscraper structure, to be called the University City Tower, will provide research and development facilities for science, industry, and education. It will cost an estimated $30 million to develop.

Announcement of the Tower was made jointly by the West Philadelphia Corp. and Philadelphia Industrial Development Corp., which are cooperating in the giant project.

Described as "unprecedented in concept," the 1,000,000-sq ft Tower will rank in size among the tallest and largest buildings in the city, and represents the most important step in the revitalization of the West Philadelphia-University City area.

It will be built on a 4-acre tract fronting on Walnut, Chestnut, and 31st Sts., and will overlook the $500,000,000 complex of buildings and facilities which will make University City itself one of the largest educational, medical, and research concentrations in the world.

Dr. Gaylord P. Harnwell, president of the University of Pennsylvania and also president of the West Philadelphia Corp., said construction of the Tower will start this fall.

a brand new
PROFIT MAKING LINE
of Commercial air-cooled
split systems FOR YOU!

Air Conditioners
MODELS FROM 7½ TO 20 HP. MULTIPLES FOR HIGHER RATINGS

Heat Pumps
MODELS FROM 7½ TO 20 HP. MULTIPLES FOR HIGHER RATINGS

ON DISPLAY
IN BOOTH 1114

CONDENSING UNIT
Rugged • Quiet • Weatherproofed • Diagonal coil for minimum plan area • Controls wired and enclosed • Compressor section may be detached • Designed for outdoors.

AT 15th
INTERNATIONAL
HEATING and AIR CONDITIONING
EXPOSITION

CONDENSING UNIT
High cfm., low sound level, Blower type fans • High capacity coil • Greater flexibility in equipment location • Supplimentary heaters if required.

Horizontal Air Handlers

CHICAGO

FEBRUARY
13-16

Sizes to match Condensing Units • For remote installation with ducts or with plenum and 4-way grille as optional extra • Large coil face area for low air velocity and low sound level.

12 YEARS AND OVER A MILLION UNITS
of air conditioning and refrigeration systems have provided the experience behind this Commercial Line. Since 1949 our facilities have expanded each year to where we now have more than 230,000 square feet of manufacturing area. Addison's know how, experience and fully equipped plants are your assurance of quality products.

ADDISON PRODUCTS COMPANY
ADDISON, MICHIGAN · PHONE LINCOLN 7-1200

Mineral Wool Building Insulation Standard

3 Thermal Performance Categories for Homes Defined by NMWIA

NEW YORK CITY—The first standard ever written for mineral wool building insulation has been published by the National Mineral Wool Insulation Association, the group announced.

One of the standard's main purposes is to define these three thermal performance categories for homes in terms of both "U" values and installed resistance units or product designation:

(For special situations where additional insulation is deemed necessary, the standard gives an optional ceiling "U" value of 0.04. This is met by a product designation of R-24).

The association's standard also details the physical requirements of mineral wool insulation. Tolerances are specified for vapor permeance of facings, dimensions, resistance to mold and decay, thermal performance, and fire resistance. Test methods are included.

A standard method of determining thermal performance ("R") values is prescribed.

The standard defines installed resistance (R) as the sum of the resistance of the mass insulation and the resistance of any adjacent air spaces or the resistance of any exposed insulation surface which may exist. Thermal resistances of air spaces and surfaces of reflective and non-reflective materials are outlined in an accompanying table.

The standard requires that mineral wool batts and blankets be packaged in containers marked with installed resistance values for recommended applications for specified directions of heat flow.

It also requires that packages of blowing wool insulation be marked with the installed densities, thicknesses and corresponding coverages per bag needed to meet the standard ceiling installed resistance of R-19, R-13, and R-9 and the standard wall installed resistance of R-11.

An abbreviated form of the standard, confined to thermal performance, also has been published.

Both are available from National Mineral Wool Insulation Association, 1270 Sixth Ave., New York 20, N. Y.

	SECTION	U VALUE	INSTALLED RESISTANCE & PRODUCT DESIGNATION
Quality Home Requirements	Ceiling	0.05	R-19
	Wall	0.07	R-11
	Floor	0.07	R-13
Moderate Comfort and Economy	Ceiling	0.07	R-13
	Wall	0.09	R-8
	Floor	0.09	R-9
Minimum Home Requirements	Ceiling	0.10	R-9
	Wall	0.11	R-7
	Floor	0.11	R-7

Wrenshall Elected Kerotest Vice President

PITTSBURGH—E. N. Wrenshall has been elected vice president of Kerotest Mfg. Co., it was announced by W. G. Young, president.

Wrenshall

Wrenshall has been with the organization since 1946, first as director of purchases. In 1958 he was appointed general manager.

Copeland Sees Record-Setting 1961

SIDNEY, Ohio—Earnings of Copeland Refrigeration Corp. in its first fiscal quarter, ended Dec. 31, are estimated to be between 50 to 55 cents a share, states Frank J. Gleason.

For the similar period in the previous fiscal year earnings amounted to 61 cents a share. Gleason said that the decline in first-quarter sales and profits was due in part to a reduction of inventories by the purchasers.

However, he expressed confidence that sales and earnings for the 1961 fiscal year will set records, stating "we think our first half will be as good as last year and full year will be better."

Copeland set up subsidiary manufacturing operations in Canada and Mexico last year with the idea of augmenting licensee arrangements in other countries. Gleason said the Canadian operation "may break even" this fiscal year, but the Mexican subsidiary probably will take longer to become profitable.

All-Expense-Paid Trips To Las Vegas, Miami, Mexico

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Cooling Towers and DriCoolers

Best In Cooling Towers and Air Cooled Condensers . . . AND A BONUS FOR CUSTOMER CERTIFICATION OF SATISFACTION. This is Marley's method of building better customers through better understanding of cooling equipment by owners.

Join this owner-education program and you can be selected to receive an all-expense-paid vacation for two. Every contractor is eligible; all you do is send the names—Marley does the rest. One of these holiday tours (plus cash for entertainment) may be yours:

1. **Fly to LAS VEGAS** — Four days in fabulous entertainment capitol of America at famous resort hotel.
2. **Fly to MIAMI** — Seven days on Florida's famous "gold coast" in beautiful beach hotel with every recreational facility.
3. **Fly to MEXICO** — Twelve days in the "land of manana," where Mexico City and Acapulco (with interesting side trips) will be your destinations.

Get complete information immediately from your Marley Man or send in the coupon on next page; an early start gives you a bigger opportunity.

Full information at Marley Booth No. 616 ASHRAE EXHIBIT Chicago, Feb. 13-16

THE MARLEY COMPANY

Response To Hand Delivered Invitations To Product Meetings Flabbergasts Wholesaler

DALLAS, Texas — Climate Supply Co. here tried a new approach to customer relations and even Ray F. Polley, who originated the idea, was "flabbergasted" at the response.

A letter was sent to a list of customers inviting them to a series of meetings at which direct factory representatives from outstanding national firms would demonstrate the latest equipment in the air conditioning, refrigeration, and heating fields. Each gathering was to be preceded by a buffet lunch.

Most of the invitations were hand delivered and despite the fact that they were received only a few days before the first meeting, Jan. 4, there were 58 customers on hand in Climate's new building at 2332 Valdina St.

The company thought this an extremely good response. Imagine their elation the following week when 164 customers appeared for the dinner and meeting. They had to send out for more food and more chairs. Customers came from as far away as 50 miles. Attendance for the third meeting was 80.

East Texas Group Forms; Sets Up Bid Registration, Depository

LONGVIEW, Texas — A bid registration and bid depository procedure has been instituted by the East Texas Plumbing, Heating & Air Conditioning Contractors Association, according to Harry Wren, manager.

The association was formed last summer. Nine objectives were adopted:

1. To arrange for and promote meetings of plumbing, heating, and air conditioning contractors engaged in business in this area.

2. To promote sound labor relations on the basis of labor and management cooperation in the public interest.

3. To promote and join in the operation of programs of practical training and related instructions for apprentices and advance training for journeymen in the trade in this area.

4. To distribute among the members and assist them in the use of the fullest information obtainable in regard to all matters affecting the business of plumbing, heating, and air conditioning contracting.

5. To increase public acceptance for the services of such contractors in this area by improving the standards of the industry both as to personnel and performance.

6. To cultivate a cooperative spirit among members and encourage respect for the rights of others, with proper regard for the laws and rules governing fair competition.

To Collect Business Data

7. To collect business data from members and other sources in order that the economic value of the plumbing, heating, and air conditioning contracting industry may be accurately presented to governmental agencies as well as other appropriate bodies.

8. To establish and maintain friendly relations in this area between plumbing, heating, and air conditioning contractors and all other branches of the construction industry.

9. To support the National Plumbing Code and all recognized plumbing, heating, and air conditioning mechanical installation standards which have been or may later be established for this area.

Woods First President

Drew Woods, mechanical contractor of Carthage, Texas, is president of the new association. Other officers are C. A. Stokes, Metal Engineers, Greggton, vice president; Alton Hillencamp, Hillencamp Engineers, Jacksonville, secretary; and C. B. Perkins, Perkins Plumbing Co., Longview, treasurer.

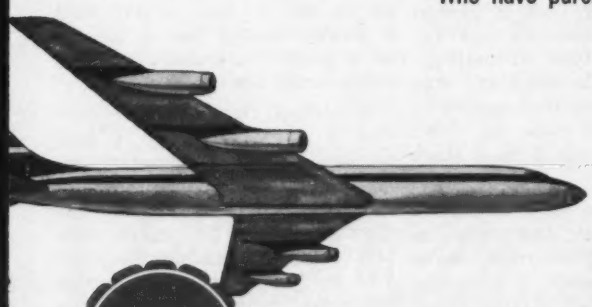
The group has been holding meetings every two weeks. Main meeting place is Henderson because it is centrally located in the area served. However, in the interest of association progress, meetings have been held in the principal towns in east Texas, Wren pointed out.

AQUATOWERS® Superior performance, rugged construction and hot dip galvanizing for long-service durability make them the world's most-preferred steel mechanical draft cooling towers. Operational dependability eliminates profit-reducing service call-backs, making Aquatowers tops in over-all economy — first in customer satisfaction.

PERMATOWERS® These towers bring together Marley's performance-proved Double-Flow design and a selection of unique construction materials—a combination which results in a high-performance tower with maximum resistance to corrosive elements. Vertical air discharge permits location in closely confined locations.

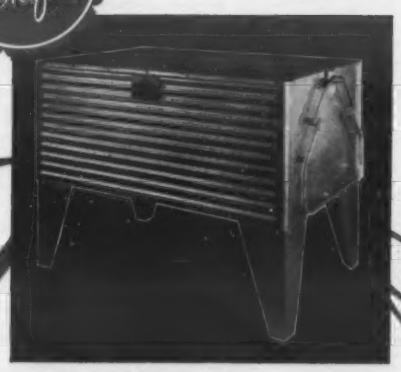
JUST SEND THE NAMES OF CUSTOMERS

Who have purchased Cooling Towers or DriCoolers since February 1, 1961 — **that's all**

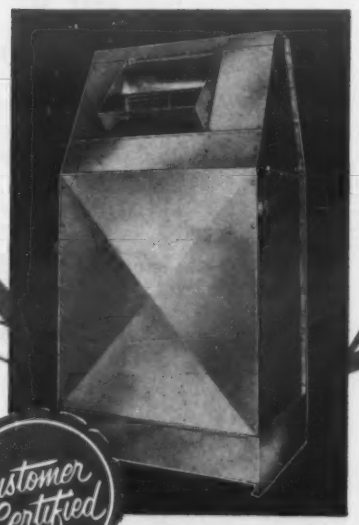


AQUACOOLERS® Whisper-quiet, leak-proof operation makes AquaCoolers especially suited for indoor installation. Air delivery adjustable to accommodate ductwork pressures. Minimum assembly requirements permit quick, easy installation. All models hot dip galvanized for long service-life.

SPRATOWERS® Ruggedly constructed natural draft towers offer maximum water cooling economy both in original investment and operating cost. Design of nozzles and spray system assures efficient water cooling performance with minimum maintenance. All tower components are piece-marked for quick, easy assembly.



DRICOOLERS® Air cooled refrigerant condensers engineered for durability, controllability, compatibility. Efficient blow-through design adaptable to any location. Damper control for fool-proof, low-temperature operation of single- or multi-circuit units. Exclusive PreCooler overcomes high dry bulb temperatures.



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222 West Gregory Blvd.
Kansas City 14, Mo.

Send me immediately information on your "Customer Certified" program that offers bonuses for owner education.

Contractor_____
Company_____
Street_____
City_____

3 HP
Self-Contained Air Conditioner

Model PA 30-A

- In 2, 3, 4, and 5 HP
- Available in summer-winter heat pumps
- UL Listed for outdoor installation
- Low silhouette for flat-roof work

Write for details today!

HEAT CONTROLLER, INC.
Losey at Wellworth Jackson, Mich.

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

ber of students will be on the campus throughout the year.

The 44 weeks of instruction will leave eight weeks for general maintenance of buildings, registration, counseling, and examinations—to be handled in the two-week periods between quarters.

Students will spend at least two quarters in off-campus work or study during their undergraduate years.

This will include study abroad (under Kalamazoo's existing and extensive overseas program), research internships, on-the-job training, outside reading, or preparation of a senior thesis.

President Hicks agrees with the NEWS that it will be impossible for most colleges to enlarge facilities quickly enough to keep pace with growing demands.

"It is tradition alone which keeps college campuses idle for three months in the summer."

Under Kalamazoo's present 16-week semester plan, the average student now spends 480 hours in a class in a two-semester school year. Under the three-quarter plan, he will be in class 495 hours.

There will be significant benefits for teachers, too. They will teach three quarters and take their vacations on the same staggered schedules applying to students, with considerable choice of vacation periods.

More importantly, they will spend more time with their students because of the five-day schedules. And each teacher's student load will be cut, from the present average of 85 to about 50.

A 66 per cent increase in enrollment will mean a 66 per cent increase in tuition receipts—but only about half of the additional money will be needed for additional teachers. The rest can be used for salary increases.

We Like This Saxon

One of the hazards and handicaps of traveling so much is that correspondence piles up in our absence.

At the same time, it's a never-ending thrill—no matter what the time of night—to return from Wherever and riffle through the accumulated mail.

Always there are surprises. As an example, please consider the following immensely human and candid document:

3766 School Squadron
Sheppard AFB, Texas

Editor:

Having followed your column through many months in the issues of the NEWS that pop up here at the Air Force school, I've come to feel that I know you quite well.

From your comments on the industry it seems apparent that you are quite familiar with the business and well qualified to advise a young whipper-snapper who's just gotten his feet wet, so to speak. I'd like to trouble you for a few sage words, if I may.

Back in August of 1957, when I was still trying to recapture the glory of a head of hair shorn during basic training, the Air Force decided that I was to become a Refrigeration - Air Conditioning Specialist. So, they shipped me off to Ft. Belvoir, Va., for training at the Army Engineer Corps school.

At the time, I hated the school. Nevertheless, when graduation time rolled around, I had the second highest average in the class and the highest among the AF students. It was decided that I would become an instructor there.

Now the shoe was on the other foot, and I saw just what my own instructor had to put up with! I stayed there as an instructor until December of 1958, learning more and more and more about refrigeration with each passing class . . . and getting interested in it.

By December, the AF had opened their own school here in Texas, and those of us assigned to refrigeration at Belvoir were transferred. In the last two years here I have learned and learned . . . and I want to make a career of refrigeration.

Had I the money to attend college, I'd certainly go ahead and get a degree in mech engineering; as it is, that will have to come through night school, if at all.

Now comes the monkey-wrench (left handed): Where in the industry does a person with my qualifications look for a job? What type of employment would I be good at? Are my qualifications best suited to any particular type of job? Where in the world do I start looking?

My discharge date is but a few months away, and while I'm not particularly worried about being out of work, I certainly am worried about getting stuck with the wrong job.

If you could offer any advice to clear this up, I certainly would appreciate it very much.

PAUL R. SAXON

Answer: Readers are invited to reply.

More from Our Mailbag

Frigidaire Products of
Canada Ltd.
Scarborough, Ont., Can.

Editor:

As an enthusiastic reader of your articles since 1934, spending many hours laughing at your humorous stories in "Inside Dope," I thought you might be interested in the enclosed letter written by Joe to his pal Al.

J. H. CAIRNS,
Commercial Sales Manager

Dear Al:

Well, here it is the end of another working day—the time when I usually take time out to write a few letters to my good friends, the time when I remember all the good things, and indulge myself in getting a little sentimental.

It's a rainy evening, but here in my living room it's cozy and comfortable. I'm sitting before a nice open fire with my typewriter, sort of half listening to the hi-fi and slowly sipping a nice, very, very dry double martini.

I only wish you were here, but since you are not, the least I can do is to toast to your health and happiness, so time out, old pal, while I bend my elbow to you.

I just took time out to mix another martini, and while I was out in the kitchen I thought of all the time I would waste this evening if I went out to mix another drink every one one in a while, so I just made up a big pitcher of Martinis and brought it backin with me so i'd have it right here besideme and would't hav to waste time making more of them.

So now Im all set and here goes. Besides me are a great drink. Forsome reason they never seeme to affec me in the slighgtost. Can drink thrm all day long.

So here goes. gpes.

The greateist thingg in the whole worled is frindship. An belieive me pal you are the greatast pal anybody everhad. Do you remember all the swell times we had to guther pay? The wonderfull camping trips. I½ll never forget the time yu put the dead skuunk in mie slieeping bag. ha, ha, ha.

Boy tho we laughed in we. Ndver did get the stinkk nout. But it wass prty funny anywah. I still laught about i onec in awhile. No as muchh as i uset to.

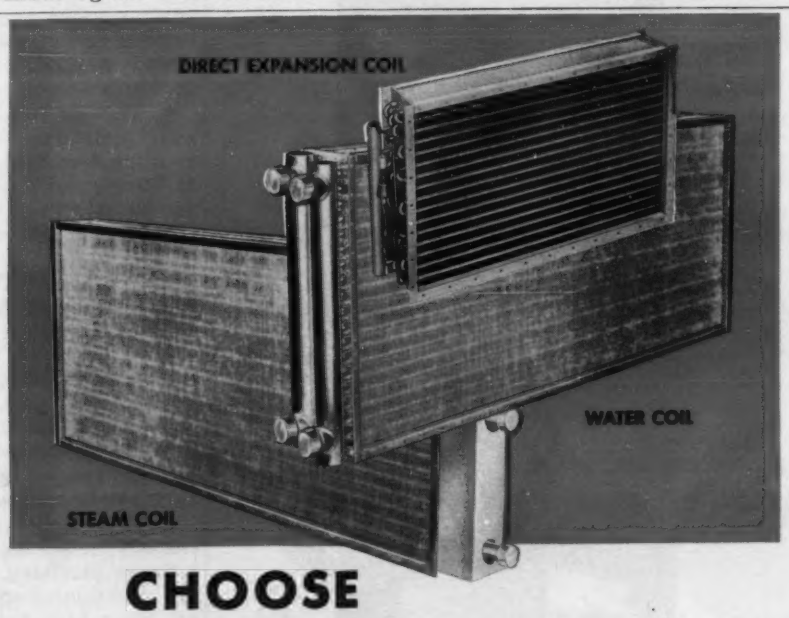
But whath the heck?. After all yu still mybes ole pal. And if a guy can½t hav a laughg on a good tru freind one in a while waht the helll.

Knotched Damn pitcher over was e mpty anwy so I just wentout an make anoter one and i sure wisch you weer heer ol pal to help me drink ths martani becus they ggret. simplyi deliuscius. pardn me whyl I lif my flass to yur good haelth oncemore becus youu½e the bests pal i gott.

off cours why a pal wuld do a dirty think likee purtin a skunk in a nother pals slepping bagg i"dmn if i kno'! Tat was o luousy think for anybbody todo an oly a firs class heal wuld do itt. wasn a damn bit funney. still stinsk.

and if you thinkitwus funney yyour a diryt lous an as fara as i½m concernned you cn go plum to hell two hell with oyuu.

Az freind --------



CHOOSE BOHN KNOWN-CAPACITY COILS

ALL BOHN COILS are ruggedly built . . .

- Die-formed plate-type aluminum fins . . . from 4 to 14 per inch . . . with self-spacing collars completely covering the tubes. Permanent, tight, metal-to-metal fin-tube bond.
- Heavy-gauge casings die-formed from galvanized steel.
- Headers of heavy-wall seamless copper tube with heavy die-formed end caps. High pressure tested at 320 psig. minimum air pressure under warm water.
- Tested and rated according to ASRE-ASHAE standard 33-58.

IN ADDITION . . .

DIRECT EXPANSION COIL — Type DE, insures equal distribution of refrigerant with brass pressure-type distributors;

WATER COIL — in Types WH, WF, and WD, is drainable in every type;

STEAM COIL — in Types S, NFS, and NFO, has condensing tubes pitched in casing a minimum of ⅛" per foot of tube length, as well as orificed steam supply tubes, and coil tubes floating free within coil casing to prevent stress and strain on tubes and joints . . . maximum operating pressure 200 psig. at 400° F.

We have some territories still open for Manufacturers Representatives who are active in the heating and air conditioning fields. Write today to Sales Manager, Heating and Cooling Coil Department, at the address below.

BOHN *Buy the known line . . . the BOHN line*
Aluminum & Brass Corporation
Danville Division • Danville, Illinois

Thinking of—

- **changing territories**
- **expanding your territory**
- **taking on new lines—**

Check the
CLASSIFIED ADS
Your opportunity may be there.

Steam To Operate Cooling Systems In 25 Apt. Buildings, Skyscraper

NEW YORK CITY—Over 25 new apartment buildings have either installed or are under contract to install central air conditioning systems operated with Con Edison Steam, it was reported recently by Con Edison Steam Service.

It was also reported that Con Edison Steam will serve the new 31-story, $20 million, completely air conditioned Western Electric building at 222 Broadway.

"A peripheral high velocity system will deliver conditioned air to the exterior areas through induction type window units, while low pressure ducts will service the interior areas through ceiling diffusers," it was pointed out.

"Comfort cooling will be provided by 2,250 tons of refrigerating capacity, with the two 1,125-ton steam turbo compressors being operated with Con Edison Steam."

High-Pressure System Going Into Nigeria's Independence Bldg.

NEW YORK CITY—Nigeria's tallest structure, the 26-floor Independence building under construction in Lagos, will have an advanced high-pressure air conditioning system similar to those being installed in modern U. S. office buildings.

This was announced by Westinghouse Electric International Co., supplier of the system.

R. L. Jeans, vice president-products of Westinghouse International, said the 600-hp installation will serve offices to be occupied by a number of Nigerian government agencies. Individual units will provide air conditioning for a rooftop restaurant and machinery room.

The air conditioning apparatus will include five 100-hp water chillers and two condensing units, together with a "control center."

The Independence building is being erected under the direction of the Nigerian Ministry of Public Works. Societe Commerciale de l'Ouest Africain, Westinghouse distributor, has secured the installation contract.

Tony Miller Installed As President Of Detroit Heating Contractors

DETROIT — Tony Miller of Miller Heating & Air Conditioning Co. was recently installed as president of the Detroit Heating & Air Conditioning Contractors Association.

He succeeds Harold Bowie, Gas Burner Service & Distributing Co., who joins the board of directors.

Other officers installed at the group's January meeting are: Thomas Krutsch, Krutsch Heating, Inc., vice president; Albert Norris, Reliable Heating & Cooling, Inc., secretary; and Milton Moss, Wm. A. McKinnon Co., treasurer.

Board of directors is comprised of John Colomina, John Colomina & Sons; Glen Haskins, Thompson Heating Co.; Frank Kinsel, Kinsel Heating & Sheet Metal; Earl McKenna, Redford Furnace Co.; Clarence Tressler, Walter W. Thomas Co.; Robert Van Assche, Detroit Safety Furnace Pipe Co.; Edward G. Behm, Michigan Consolidated Gas Co.; and Bowie.

Chicago Typographer Installs Heat Pump In All-Electric Plant

CHICAGO—Four 20-ton heat pumps provide automatic climate control in "Chicago's first all-electric plant" which has been placed in operation by Logan Square Typographers, Inc., at 901 W. Monroe St., according to John E. Jensen, president.

The "Cool Heat" system, which was installed by Drying Systems Co., also filters the air and controls humidity. The heat pumps are designed to maintain a comfortable temperature level, ranging between 70° in winter to about 76° in summer.

Built at a cost of $350,000, the new 23,500-sq ft building marks another highlight in the redevelopment of the near west side, it was stated.

Shades of Davy Crockett!

To Air Condition the Alamo

SAN ANTONIO—The chapel known as the Alamo, after more than two centuries, is going to be air conditioned.

According to Harvey Partridge Smith, Sr., an architect who has supervised the restoration of the four Spanish missions in San Antonio for more than 30 years, two air conditioning manufacturers have volunteered to do the job on the Alamo.

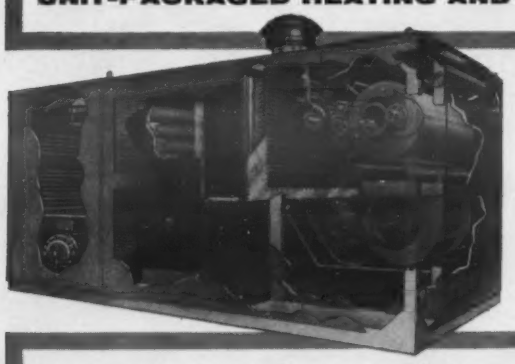
"The chapel sadly needs air conditioning," Smith said "It gets awfully hot in there at times. I'd like to see the air conditioning machinery and ducts well camouflaged. If the machinery is put in the yard it could be hidden behind a cedar stockade, for example. Of course, it's all up to the Daughters of the Republic of Texas, custodians of the Alamo."

Smith said it has been estimated that at least 20 tons of air conditioning will be needed to make the Alamo comfortable on the warmest days. The architect has suggested that 10 tons come through an upstairs window on the east. And five tons each would come through doors from two upstairs rooms.

"I'd also like to see the heating system camouflaged," said the architect, who is a Minnesota native but who has lived in San Antonio for 50 years.

The Alamo currently is heated from a boiler in the basement of the museum, just to the north, and steam pipes and radiators are now visible inside the ancient chapel.

Compact-Aire ROOF-TOP
UNIT-PACKAGED HEATING AND COOLING



A SIZE FOR EVERY JOB
Heating capacities (oil or gas) 120,000 to 1,000,000 B.T.U. output.
Cooling capacities (air or water) 5 to 40 tons
3 designs—4 series 34 sizes

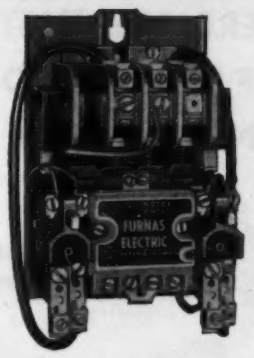
Economical installation—Efficient operation

● Compact-Aire Roof-Top packaged units are economical to install and operate. They require a minimum of wiring and piping, and practically eliminate expensive duct work. With a Compact-Aire unit selected to meet the individual heating and cooling requirements of each job, efficient operation is assured. Units are weatherproof. First costs are minimums. Operating costs are low. Write for free brochure YR-161.

See us at Booth #917

MAMMOTH INDUSTRIES, INC.
6425 Cambridge Street • Minneapolis 26, Minnesota

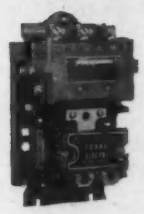
new CURRENT RATED STARTERS



Through 53 amps, rated in full load and locked rotor. Can be used for both 220 volts and 440 volts.

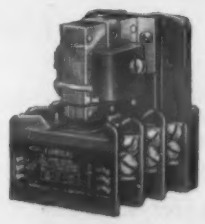
new CURRENT RATED CONTACTORS THROUGH 90 AMPS.

Furnas Electric offers a complete line of current rated contactors through 90 amps meeting requirements of the Air Conditioning and Refrigeration Industry.



90 amperes

Contactors through 40 amps, 2, 3 and 4 pole with interchangeable mounting dimensions are available for compressor and electrical heating applications.



40 amperes

2 and 3 pole, 25 amp contactors are used for unattended domestic and commercial applications, and for resistance heating applications.

25 amperes

SEE THEM ALL AT THE SHOW—
BOOTH 1146-48

A95

FURNAS ELECTRIC COMPANY
BATAVIA, ILLINOIS
SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

Previews

Mfrs. Announce Booth Plans for Heating And Air Conditioning Show In Chicago

Penn Ventilator Co.

The focal point of Penn Ventilator Co.'s booth 338 will be the simulated rooftop installation of a centrifugal exhauster.

In addition, miniature operable models of the "Pyroport" fire vent and the "Litex" ventilator will be featured. A line of stationary and operable extruded aluminum wall louvers and fire dampers will be introduced, and the Penn "Omega" gravity ventilator will be displayed mounted on the company's seamless spun base.

Trion, Inc.

A new electronic panel filter (model TPF) will be highlighted at the Trion, Inc. display at booth N-507.

Also featured will be a new utility model, plate-type electronic air cleaner with "deluxe" features such as built-in water wash, and commercial equipment such as the TFA self-contained, portable electronic air cleaner and blower assembly.

Sarco Co., Inc.

Special feature planned by Sarco Co., Inc., will be a sound animated exhibit of the operation of its thermo-dynamic steam trap, Type TD-50.

The company will display, in booth 615, its complete Sarco-Sarcotherm line of temperature controls, steam traps, and heating specialties, including new unit heater control, new zone valve, and new room thermostat.

United States Register

United States Register Co. will exhibit its full line of air conditioning registers, grilles and diffusers, and accessories at booth 1032.

Acme Engineering & Mfg.

Fan and ventilators will take the front seat in Acme Engineering & Mfg. Corp.'s booth 1133.

A low pressure high volume belt-driven propeller fan, a new type high pressure, belt-driven propeller fan available in sizes from 24 through 72 in., tubeaxial belt-driven fan available in sizes from 16 through 48 in., direct driven, propeller power roof ventilators, and other related products will be displayed.

Air Devices

A number of Air Devices, Inc.'s current products, along with new ones, will be displayed and demonstrated at booth 1015.

A shadow box will depict the jet induction action of "Agitair" square and rectangular diffusers with built-in diffusing vanes. The company's new line of constant volume high velocity mixing boxes will be demonstrated. "Stripline" slot type air diffusers will be presented, and other items of interest to architects, engineers, and contractors will be shown.

Kritzer Products

In booth 1137, Kritzer Products, a division of Peerless of America, Inc., will exhibit a complete line of heating and air conditioning fan coil units with the Kritzer "Combinex" System in the high standing HS series; a complete line of console, in-a-wall, suspended ceiling models; new type of heating and air conditioning unit known as the "Room Divider," and a line of water chillers.

In addition, the firm will display a complete line of electric heating units.

Air Motion Research

The Mixed Axial Centrifugal fan, a mixed flow fan especially developed for ventilating, air conditioning, commercial, industrial, and marine applications, will comprise the Air Motion Research exhibit in booth N-247.

Features and advantages of the MAC fan, which is furnished and cataloged in 20 sizes with performance tables to meet most air-handling requirements, will be pointed out by the booth staff.

Armstrong Cork Co.

Two new insulating products will be introduced by Armstrong Cork Co. in booths 1042-1044.

Being shown for the first time at the show will be Armstrong "Armaglas Duct"—a new prefabricated air duct made from fine glass fibers and encased with an air-tight vapor barrier; and "Rigid Armaflex"—a load bearing insulation designed for use at pipe hanger locations, deeply buried underground lines, and other areas where pipe covering may be subject to compression deformation.

In addition, Armstrong also will show and demonstrate its complete line of Armaflex insulations and sundry items.

Dryomatic

Dryomatic Corp. will present its complete line of dehumidifiers and industrial air drying systems in booth 210.

Featured will be the compact new model 50, a small desiccant-type dehumidifier designed especially for use in conjunction with drying cabinets, climatic chambers, ovens, and other applications where a small space has to be maintained at very precise low humidity levels.

Other models on display will include household models of both the mechanical refrigeration and chemical adsorption types, as well as industrial dehumidifiers in the 25 cfm to 150 cfm range.

Danfoss

Danfoss, Inc., a new American corporation which will supply equipment and controls for the air conditioning, heating, and refrigeration industries, will display its product line to the U. S. market for the first time.

Compressors and fuel pumps are among the types of equipment to be shown at the Danfoss booth (135-139). Control products on display will include a complete line of temperature and pressure devices such as expansion valves, solenoids, and thermostats.

Incorporated in the State of New York, Danfoss, Inc., is a subsidiary corporation of Danfoss of Denmark.

Randall Graphite Bearings, Inc.

Strap type pillow blocks and a midget bearing assembly will be emphasized in booth 1007 by Randall Graphite Bearings, Inc.

Regarding the former, the company said these new units are of particular interest to manufacturers in the air moving industry. Compact, economical design is said to reduce OEM and replacement costs. The miniature bearing assembly has been designed especially for manufacturers of small franctional horsepower motors, but other uses are being developed.

Don't be satisfied with less than

HERE ARE JUST A FEW OF THE REASONS YOU'LL FIND LENNOX PROFITABLE:

- ✳ **You have available the finest sales and service training schools in the industry**
- ✳ **Powerful selling and financing plans at your disposal**
- ✳ **Field engineering assistance, special help on special problems**

In a phrase, it's the "momentum of leadership" that adds the extra spark of prestige and profit for Lennox dealers. And that is the result of a great many things—such as close, friendly co-operation between the nearby Lennox factory and you, the dealer. Teamwork, in other words. It means factory help in tangible ways plus your own enthusiastic salesmanship and workmanship at the local scene.

It's true that not every dealer can qualify to be a part of the Lennox team. But if you have reason to suspect you could become a Lennox dealer—don't just sit there wishing! After all, it costs nothing to hear the complete story in complete confidence. Mail the coupon today, or phone the nearest Lennox factory.

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SUPPORT
Famed John Cameron Swayze becomes your spokesman locally! Every afternoon, Monday through Friday (on ABC radio), he tells your prospects YOU are the man to see for home comfort. Ads in leading consumer magazines also help sell your services in your trading area. And there are two-fisted sales aids for every medium, every budget, every dealer need.

Stanley Works

Emphasis of the Stanley Electric Tools exhibit at booth N-435 will be on demonstration of two new tools recently developed for the building, plumbing, heating, and air conditioning trades.

Stanley's all-purpose saw #363 will cut flush up or down, left or right, without additional attachments, and also features two-speed operation, the company said.

Features which include an exclusive patented high-frequency rotating action will be demonstrated by Stanley's new breakthrough impact drill.

Milwaukee Valve

As evidence of its intensive expansion program, a sampling of the 40 new items recently added to its line will be on display at Milwaukee Valve Co.'s booth 227.

A new line of gate valves, including the 150-lb SWP industrial union bonnet gate; a new line of globe valves, including the 150-lb SWP industrial union bonnet globe; a new line of supply headers and return manifolds for radiant panel heating; and a new line of heating specialties will be highlights of the exhibit.

Leece-Neville

A broad range of shaded-pole and permanent split-capacitor motors, ranging from 1/100 through ½ hp, will be displayed by the Georgia Div., Leece-Neville Co., in booth N-231.

The company noted that its motors are sold for applications in room air conditioners, furnaces, coolers, central units, etc.

Peerless of America

A new type coil for both refrigeration and heating and a cast aluminum beverage cooler will be introduced in booth 1141 by Peerless of American, Inc.

The company will exhibit a complete line of commercial refrigeration, heating, and air conditioning coils. The display will include a line of coils for electric defrost and a line of water chillers.

Walker Mfg. & Sales

First-time showing is planned by Walker Mfg. & Sales Corp. in Booth N-308, N-310 for a new draft inducer model for commercial and industrial use, new gas vent crown, and an installation display of its new fireplace draft inducer.

Included in the exhibit will be a new dual-purpose draft control —single acting for solid fuels; double-swing for gas. Regarding draft inducers to be shown, the company said a new saddle mount simplifies industrial installations. Also shown will be a chimney cap featuring stainless steel finish and a new vent cap line.

V. D. Anderson

Cut-away sample models of the firm's various types of traps, air release valves, and strainers will be exhibited in booth 1018 by The V. D. Anderson Co., division of International Basic Economy Corp.

The company will also display a working model of the Anderson "Hi-eF Purifier" for demonstrating the effectiveness of removing liquid entrainment from air. This purifier is also for use in removing either liquid or solid entrainment from steam or gas.

Exhibit theme is "The High Return from Low Investment in Anderson Fluid Specialties."

ON THESE TWO PAGES and page 26 appears the fifth group of "Previews" of what exhibitors will show at the 15th International Heating & Air-Conditioning Exposition in Chicago, Feb. 13-16. The show, which is sponsored by the American Society of Heating, Refrigerating & Air Conditioning Engineers, will be held in the International Amphitheatre. The earlier groups of previews appeared in the Jan. 9, 16, 23, and 30 issues.

Mt. Hawley Mfg. Co.

Residential gas and oil-fired steel boilers of a design offered to the trade for only the past year will be display in the booth (N-235) of Mt. Hawley Mfg. Co.

Also on display will be "hydronic heating stories and letters from leading jobbers" on sales and performance of this boiler.

Duro Dyne

Sharing the limelight in Duro Dyne Corp.'s booth 772-773 will be two of the company's new products—the "Pinspotter," a low-cost insulation pin welder, and the "Cheekmaster," a new tool designed to automatically lay out and cut cheeks for elbows.

Portable spot welders, the "Vane Rail" for air turning vanes, damper regulator and quadrant sets, and many other items used in conjunction with sheet metal duct fabrication will be on display as well.

Farr

Farr Co.'s theme of "Farr Filters On The Job Throughout The Country" will be carried out in booth 10 with an exhibit motif of a building job site incorporating construction pallets, girders, nail kegs, etc.

Farr's model H-5 horizontal roll-type filter will be displayed for the first time, as well as its complete line of new V-7 roll-type filters and its "Hi-Kleen" two-stage disposable filter.

Ridge Tool

Two new "Ridgid" tubing cutters, featuring fully enclosed feed screws that can't jam with chips or dirt, and three new accessories that immediately convert the portable "Ridgid" 300 Power Drive into a pipe and bolt threading machine, will be highlights of the Ridge Tool Co. display.

The company will be exhibiting its full line of powered and hand Ridgid pipe tools in booth 636, 640.

Auto-Flo

The Auto-Flo Co.'s permanent air filter, which was recently judged one of the ten best new products of 1960 by *Parade* magazine, will be highlighted at booths 302 and 401.

In addition, Auto-Flo will feature its new, improved #30-W plenum humidifier which has prewired humidistat controls, and the #60 portable humidifier.

Plate type humidifiers and accessory parts, fuel oil filters, and replacement cartridges will also be exhibited.

Krueger

Krueger Air Conditioning Co. will display in its main exhibit the various types of residential and commercial grilles, diffusers, and registers that it manufactures.

In addition, a smaller display will show its accessory lines, such as barometric dampers, mixing dampers, outside louvers, and volume controls dampers for ceiling diffusers. Booth numbers are 310, 312, 314.

Armstrong Machine

The Armstrong Machine Works exhibit in booth 625, 627 will be devoted to both steam traps and humidifiers.

Featured will be a glass model of an 812 trap operating on steam at 7 lbs gauge. The complete line of open float and thermostatic traps with all stainless steel working parts will be shown.

A steam humidifier will be connected to a 10 psi steam line and an evaporative humidifier of improved design will also be demonstrated.

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Up, down or horizontal flow heating units in choice of fuel: electric, gas, oil, coal. Heat pumps and air cooled air conditioning, of course! Over 400 in all.

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I'm willing to listen to the Lennox story—confidentially. I understand this does not obligate me; I just want the facts.

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AIR CONDITIONING HEATING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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Editorial

REFRIGERANT—22: *Hero or Villain?*

More than a decade after its introduction, Refrigerant-22 remains a controversial item.

Although there are exceptions on both sides, servicemen for the most part are anti-22; manufacturers in the majority favor the refrigerant.

As indicated in the Tech Center articles ending this week, manufacturers repeatedly state, "In properly designed and properly applied systems, Refrigerant-22 offers no problems."

If that is true, there are thousands of improperly designed and applied systems employing R-22.

Over and over, servicemen complain, "Properly designed or not, R-22 has basic properties which make it undesirable in spite of some engineering advantages and economies for manufacturers."

If this is true, then many of our industry's brightest engineers and production people are indifferent to the plight of their middlemen and their mutual customers.

We suspect the truth is between these extremes.

Most manufacturers admit that first attempts to capitalize on the advantages of R-22 were ill-advised. Far too many producers of components and equipment tried the easy way—merely substituting 22 for 12 without altering design of their products.

The result was inevitable: the service industry was swamped with an unprecedented load; failure rates went up—on one line of fixtures field failures approached 30%. For comparison, manufacturers today feel they are in serious trouble if failure rates approach 2% on any major design.

This was a black eye for Refrigerant-22 from the serviceman's point of view; it was an eye opener for manufacturers who then began redesigning equipment specifically for application with R-22. While such redesign has not been universally accomplished, improvement has been sufficient to make most producers happy with the refrigerant.

This majority reports that differences between the service requirements of R-12 and R-22 units is negligible or non-existent. Where there is a slight difference, it is attributable to application—R-22 is used extensively in low temperature work, and low temperature equipment always has a higher service rate than normal temperature equipment, no matter what the refrigerant.

If this great improvement has indeed been accomplished, why are servicemen still complaining?

1—because they can't forget those first experiences

2—because they refuse to alter their procedures when working with Refrigerant-22

3—because some self-contained units, never touched by servicemen, have a much higher incidence of failure and trouble than their R-12 counterparts

4—because servicemen are always applying new products beyond their pressure and temperature limitations

5—because many of them still hope that Refrigerant-22 will go away.

Well, R-22 is not going away. Old-timers had better accept that fact and stop recalling early tales of woe.

Installation and service procedures must consider the differences between 12 and 22. There is no doubt: those servicemen who have recognized these differences are not having undue difficulty with R-22. Those who resist altering their thinking today are the counterparts of those who were against halogenated refrigerants because you couldn't detect a leak with a sulfur taper.

In our opinion, the greatest single factor preventing full acceptance of Refrigerant-22 is the no longer justified negative attitude of the service industry.

But that is certainly not the only factor, we are happy to say, since the poor serviceman is always getting blamed for something.

Items 3 and 4 point to the manufacturers.

There is no blaming the serviceman when self-contained units have a higher incidence of failure than their R-12 counterparts. It is begging the question to say that poor housekeeping is to blame, since the R-12 systems are just as unkempt. If the R-22 units can't stand up under what must be considered realistically normal use, should their applications be reconsidered?

When it comes to abusing new developments, manufacturers again come in for some of the blame. It is an old complaint of materials and component suppliers than OEM's will immediately use up and exceed any increased tolerance the supplier designs or engineers into his system.

"Create a new insulation which will not break down at conventional operating temperatures and occasional high temperatures, and they redesign their equipment to raise the normal operating temperature."

During installation of built-up systems, of course, the contractor can accomplish the same abuse of improved materials if he ignores or unthinkingly alters recommended procedures. On the other hand, component suppliers have obviously not given sufficient thought to the effects of normal field installation and servicing procedures on their products.

From all this we conclude:

Refrigerant-22 is here to stay.

Manufacturers, in spite of progress they have made, must recognize that some areas still need improvement. It is possible that they are applying R-22 in a few instances where it should not be applied.

The service industry can do most to end the controversy by forgetting what happened 10 years ago, up-dating its thinking, and adapting its procedures for Refrigerant-22.

OFF THE CHEST

Editor:

What neither the unions nor management seem to realize is the fact that there are two kinds of professionals in engi- risk of oversimplification, I shall merely call them the creative and the competent. The former are less numerous but they are seldom found in unions.

Most of the latter group constitute the people "in those industries where several hundred engineers are employed at one plant," to quote your editorial. Their work must be regimented to a degree, and the regimentation has led to the development of working conditions that prompt group representation and unionization.

(Technical Society:
Name Withheld)

George Sturgis Co.
Laredo, Texas

Editor:

We operate a jobber-wholesaler business on refrigeration, air conditioning and allied lines. We experience the normal problems of a wholesaler but most of ours center around the exporting end of the business.

Your column "Outside Dope" is one of the most refreshing and interesting parts of the NEWS.

As a suggestion, don't you think if you did more articles such as you did on Jamaica and Haiti and Puerto Rico, listing their opportunities and advantages, as well as good profits—that more men would take these opportunities? It would build up our export market.

G. F. STURGIS, JR.

91 Elizabeth St.
Floral Park, N. Y.

Editor:

I like Mr. Taubeneck's editorials and "Dope."

NEWS has more air conditioning information than a half dozen other trade magazines.

CHARLES BAASCH

From the Files of the News

25 years ago . . .

Fourth annual Heating & Ventilating Exposition opened at Chicago's International Amphitheatre with registered attendance of some 30,000 persons (the public was admitted in those days) with air conditioning taking a prominent role in the 250 exhibits. . . . At the ASHVE meeting held at the same time, a study by the society's laboratory showed that effective temperature was the principal factor in determining comfort, with relative humidity of less importance than is generally considered.

Annual sales conference of Carrier Engineering Corp. was marked by a school for dealers, and a series of talks by company officials and others including Cloud Wampler, Chicago investment banker and member of Carrier's board. . . . Directors of both the Refrigeration Supplies & Parts Manufacturers Association and the National Refrigeration Supplies Jobbers Association met in separate and joint meetings, much of the discussion centering about the qualification of jobbers under the definition formulated at the organization meetings of both associations last October.

Building owners must prepare to install air conditioning or watch their property become obsolete and vacant, delegates to the Southern Building Owners and Managers convention were told.

10 years ago . . .

The Trane Co., in pledging to stay out of contracting, said to a press conference recently that although its activities would be confined to manufacturing, they would still "continue to offer consulting engineering services on all kinds of jobs involving their equipment." . . . A new bone preservation technique involving quick freezing may permit storage of human bones for surgical use for as long as seven years.

Advantages of air conditioning in promoting recovery from surgery patients were described by Dr. R. E. Keeton at the 57th annual meeting of the American Society of Heating & Ventilating Engineers. Patients with heart disease, senile patients, premature babies, operating rooms, and recovery wards are all areas where "therapeutic air conditioning" is beneficial. . . . "Air conditioners can be utilized for World War III," the NEWS said editorially, "and the most interesting category is that of air conditioning applications dedicated to the treatment of diseases and injury . . . we face opportunity and challenge and it is with the industry's power to be remembered in history along with the Pasteurs, Kellogs, Mayos, and Kennys."

The Philadelphia Heating & Ventilating Exposition was treated pictorially; various air treating products among the 350 exhibits shown indicated new trends in heating and cooling fields and included a 5-hp hermetic compressor, and centrifugal water-chilling units up to 190-ton capacity.

Publication of a new book by NEWS Editor and Publisher George Taubeneck was anounced; "Both Feet on the Ground" is a specialty dealer's handbook assembled after countless interviews with America's "finest and most successful specialty dealers."

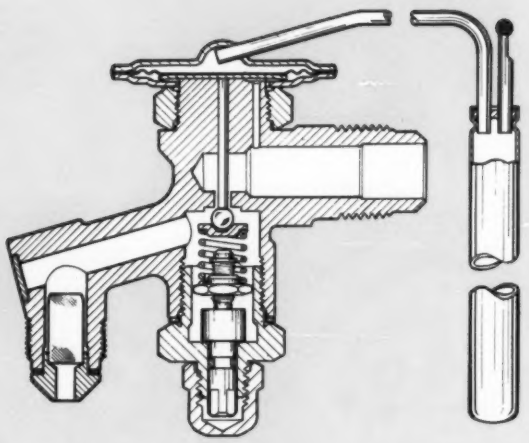
40 years ago . . .

These 40-to-60 years ago items are from the Recold Museum Library, maintained by Hy Jarvis, Recold Corp. president.

A monumental plan to bring tailor-made climate to frost-bitten citizens of Canada from Labrador to Montreal is underfoot. Serious consideration is being given the construction of a breakwater across the strait between Belle Island and the Newfoundland mainland, with the idea being to heat up the icebound coast. Eastern Canada could then boast a climate as cozy as New York's. But until this great heating system has been installed and proven, real estate values in New York will not be affected.

introducing

A BRAND NEW



COMPLETELY INTERCHANGEABLE— SAVES SPACE, TOO!

Compact in size but with the capacity to do a big job! That's the description of the new Detroit 900 expansion valve. It is ideally suited for general replacement installations where space is at a premium. Inlet and outlet connections are in the same position as bulkier valves, allowing easy replacement without repiping.

There are only three moving parts! The valve is easily disassembled for inspection and cleaning without removal from the refrigerant line.

Also available externally equalized. Tons capacity: R-12 – .5 to 3; R-22 – .8 to 5.

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COMPANY _____

POSITION _____

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CITY _____ ZONE _____ STATE _____

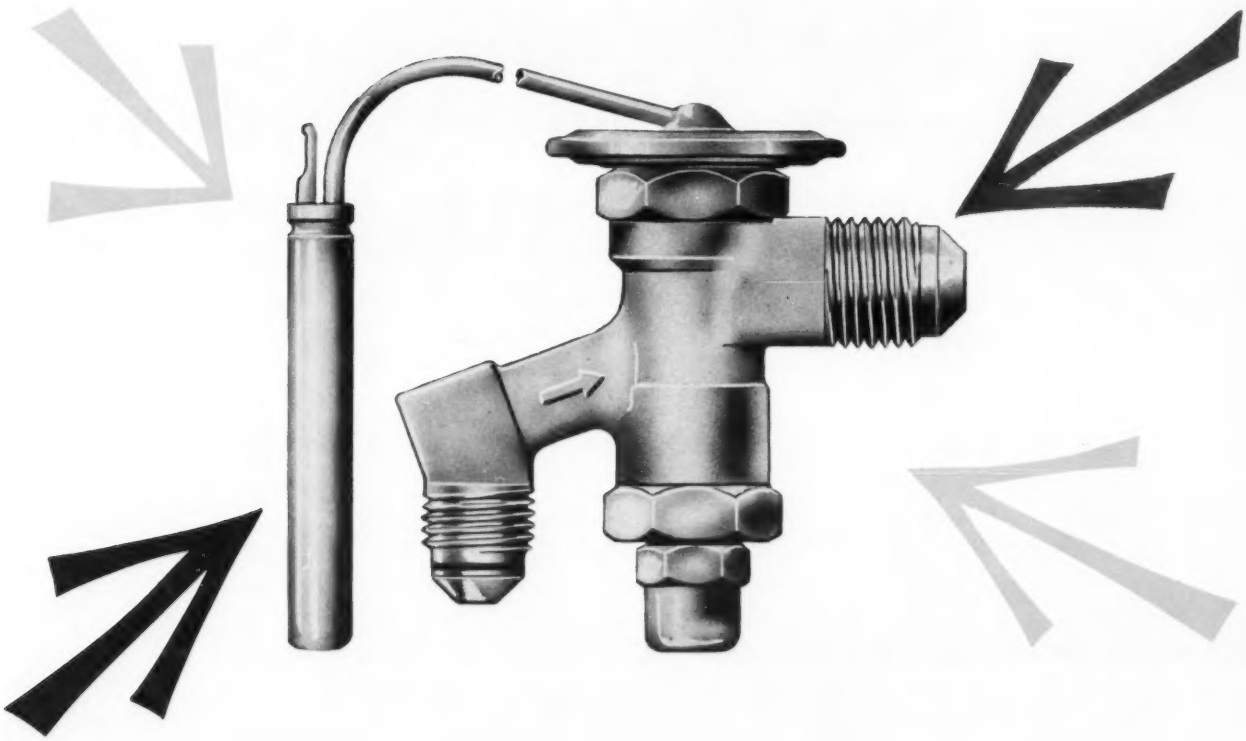
AMERICAN-STANDARD CONTROLS DIVISION,
5900 TRUMBULL, DETROIT 8, MICHIGAN

Tear out and send this card for complete details. See the Detroit 900 valve at the 1961 International Heating and Air Conditioning Exposition, Feb. 13-16, Chicago, Illinois, Booth No. 106.

FEATURES *of the Detroit 900 Valve*

POWER ELEMENT–The small removable stainless steel power element is shielded-arc welded by specially developed equipment. In this design and method of assembly, full diaphragm flexibility is accomplished. The COMPACT CAPACITY line features long life and trouble-free operation. Available in Detroit custom "C" or "Z" charges. Also available with a built-in pressure limiting element to guard against motor overloading and burnout if required.

BODY–A high density brass forging. Inlet location, and minimum number of parts, allows full and free flow of refrigerant through the valve. This simplicity of construction provides high capacity for the small size.



LARGE INLET STRAINER–Easily removed for cleaning–held in position by a retainer clip.

BALL NEEDLE AND PUSH ROD– Self aligning and self centering – seats perfectly every time. Ball is concentric to push rod.

ONLY THREE MOVING PARTS–Smoother operation and longer life. No clips, extra springs or miscellaneous parts.

EASY TO SERVICE–Valve easily disassembled for inspection and cleaning.

announcing

A NEW NAME FOR AN OLD-LINE COMPANY

→ AMERICAN-Standard

→ CONTROLS DIVISION

Detroit expansion valves are a well-known product of an old-line company. American Standard Controls Division is the new name for that company—selected because it better describes the newer and broader operations. We are bigger not only in refrigeration and air conditioning, but in many, many other industries as well. Write today for information about products which control or indicate the pressure or temperature of gases, fluids or electrical energy. American-Standard Controls Division, 5900 Trumbull, Detroit 8, Mich.

other Detroit Refrigeration and Air Conditioning Products

Expansion Valves with O.D. connections

Filter Driers—Sealed Type

Filter Driers—Replaceable Cartridge Type

Sight Glasses

Solenoid Valves

Strainers

AMERICAN-Standard PRODUCTS

AMERICAN-Standard

CONTROLS DIVISION

Milwaukee Valve Plans 'Unprecedented Year of Growth,' Adding 40 Products

MILWAUKEE VALVE CO. President H. L. Seder and Executive Vice President M. Koenigsberg checking a new Milvaco gate valve, one of more than forty new products added to the company's line of plumbing and heating valves and fittings in recent months.

MILWAUKEE — Milwaukee Valve Co., Inc., producer of "Milvaco" bronze and aluminum valves and fittings, has announced a year of expansion "unprecedented in the company's 60-year history."

This statement comes from Milwaukee Valve's new president, H. L. Seder, who, with executive vice president, M. Koenigsberg, heads the new management-owner group, spearheading an extensive program of development in the company's product lines and plant operation.

Plant capacity, according to Seder, has more than doubled through installation of specially designed automatic equipment, and the introduction of modern tooling and production methods — "permitting immediate delivery out of stock at competitive prices."

TO BROADEN LINES

Particular attention at Milwaukee Valve has been given to broadening its product line through the addition of Milvaco heating specialties, as well as gate, globe, and check valves.

The company now offers a line of packed-type heating valves and cast manifolds for gravity and forced flow hot water heat.

In addition, its new gate, globe, and check valves, both internal and union bonnet types, provide a line of standard and special purpose valves both in the economy and industrial fields — for control of steam, water, oil and gas in housing, commercial, institutional, industry, and government installations, it was stated.

"The primary aim of the new management has a two-fold purpose—to offer distributors of single-source responsibility for both industrial and domestic valves at competitive prices," the announcement said.

"This effort is keyed to a new and stringent policy of exclusive distribution and sale of all products through the better plumbing, heating, and industrial jobbers—a policy which will be reflected in more active promotion of Milvaco products to implement the individual jobber's sales activities."

The company's 1961 product line, according to Seder, will cover more than 40 new models, as well as many improvements in present items.

OHI Reports Levittown, N. J. Homes Converting To Oil as Result of Unusual Budget Payment Plan

NEW YORK CITY — More than 200 homeowners in the new gas-heated development now going up in Levittown, N. J., have converted their heating plants to oil, according to the Oil Heat Institute of America. The OHI said the heating plant conversions are largely the result of a unique offer made by the company which supplies oil to the more than 17,000 oil-heated homes in Levittown, Pa., just across the river.

"A number of those converting their heating plants are former residents of Levittown, Pa.," the institute pointed out. "The company's campaign to sell oil heat in the gas-heated homes began in September.

"As a comparison test, the company last year installed in five typical Levittown homes a new-type oil heating unit employing induced draft rather than natural draft in the combustion process.

"A careful check of oil consumption for the season was made and compared with similar gas-heated homes in the same area. The company found that these super-efficient units achieved a savings over gas of between $106 and $176 a year, depending on the type of home compared.

"With this compelling fact as a sales argument the company added the clincher: an offer to convert any home in Levittown, N. J. from gas to oil heat and allow the homeowner to pay for the conversion out of the savings on his fuel bill.

"Here's how it works: The homeowner agrees to pay the oil company for three years the same budget payments he has been making to the local gas company. At the end of this time, his savings over gas will have paid for the new oil heating equipment, and from that time on he only pays for the oil he uses.

"Spokesmen for the oil company say that some of the newest homes in Levittown are being converted to oil heat even before the home owner moves in. In these cases his budget payments are based on payments made by others in similar type Levittown homes."

A MOST SIGNIFICANT BREAK-THRU IN THE HISTORY OF AIR CONDITIONING

Soon you can have it! HI-PRESS AIR CONDITIONING OF AMERICA, INC., pioneer developer of small-pipe high-velocity air systems used in over 500 ships the world over, is fast readying this revolutionary concept for adaptation to a multitude of industrial/commercial applications on Land. (Pssst... listen! This small, twin-pipe system requires half the space needed for conventional ductwork; special pipe and fittings are Aerodynamically designed, noise attenuating; special clamping device gives leakless construction.)

A MOST IMPORTANT NEW TEAM IN ALL THE INDUSTRY

On December 15, 1960, the big news broke... about our spirited new combo: HI-PRESS and DRAYER-HANSON, who then became a Division of Hi-Press. This most logical welding of two key names constitutes a 500% growth factor. It means limitless facilities, talent, "know-how" are high-gearing to give you all the excitement noted above, plus a bold, broad line-up of air conditioning and refrigeration products to thoroughly "pace-set the Sixties." D-H—since 1910 a leading designer/manufacturer of quality air conditioning and refrigeration! HI-PRESS—the big name in Marine air conditioning. Watch us GO!

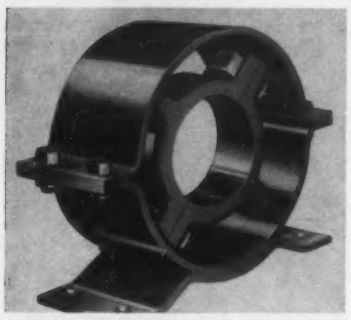
drayer-hanson
DIVISION OF
HI-PRESS AIR CONDITIONING OF AMERICA, INC.*

THE MOST URGENT THING FOR YOU TO DO RIGHT NOW...

If you are: (1) "itching" for details, (2) have even a remote interest—Get to Chicago, February 13th through 16th! Or, keep your eye on The 15th International Heating & Air Conditioning Exposition. We'll "peek-preview" these exciting developments—Booth #1172—under the proud new banner of HI-PRESS AIR CONDITIONING OF AMERICA and DRAYER-HANSON DIVISION, HI-PRESS. Meanwhile, call a Drayer-Hanson sales agent near you or receive the Full Facts on our products by contacting us now.

*Administrative Offices: Los Angeles—3301 Medford Street • New York City—Chrysler Building, 405 Lexington Avenue / Main Plant: 3301 Medford Street, Los Angeles 63, California

Steel Pipe Guides, Supports Introduced

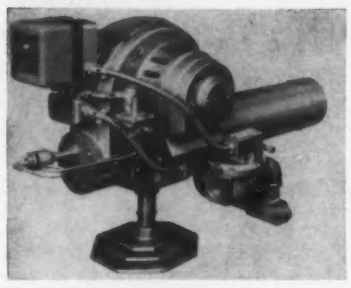


● To underscore the importance of adequate pipe support and guiding in expansion joint applications, Flexonics Corp., Dept. AH&RN, Bartlett, Ill., has introduced a new line of pipe alignment guides and roller pipe supports as an adjunct to the company's expansion joint line.

Each pipe alignment guide consists of a cast steel segmented spider, sized to the o.d. of pipe from ¾-in. to 24-in. nominal size, free to move axially in a segmented steel cylinder. The spider is clamped to the pipe, and the guiding cylinder is securely fixed to the supporting structure. The spider provides clearance for complete insulation through the guide.

Flexonics roller pipe supports are finding application even where expansion joints are not used, the company said. They are constructed entirely of steel. A formed steel spacer is provided for welding to the pipe; this spacer provides clearance for insulation, provides better support by increasing the bearing area, and relieves the pipe of direct contact with the steel roller, it was stated. The units are available for pipe sizes ¾ in. to 14 in., with larger sizes available on special order.

More details on the products described on these pages may be obtained by writing the manufacturer at the address given in each story.



Power Conversion Burners Developed

● Power conversion burners for natural or mixed gas have been added to its established line of oil burners and oil-fired water heaters by The Carlin Co., Dept. AH&RN, Wethersfield 9, Conn.

Designated the "Fire-Power" line, the new gas burners are offered in models for both domestic and commercial installations.

"Features include the exclusive 'tube within a tube' design which permits thorough mixing of air and fuel in exact proportions for maximum combustion efficiency," it was stated.

"For ease of installation and servicing, controls incorporating most modern safeguards are prewired and tested before leaving the factory."

Replacement Control Aids on-the-Job Work

● Another new Ranco A 11 replacement control has been added to the 300 series in the complete replacement line, it was announced by Ranco, Inc., Dept. AH&RN, 601 W. Fifth Ave., Columbus 1, Ohio.

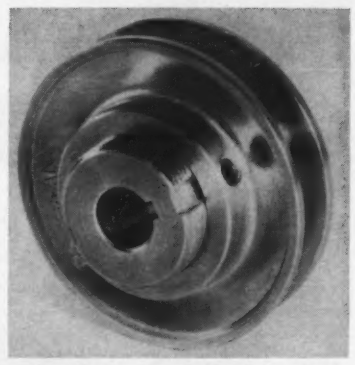
"Designed to make on-the-job control replacements faster and easier, this new control adjusts to fit 54 separate control installations," the company said. "The control mounting bracket is adjustable. Dial shaft extension can be adapted to any required length, and the capillary tube itself is easily shaped with Ranco's new forming tool.

"With the addition of this new A 11 (300 series) control, the serviceman can carry a complete assortment of controls to handle 90% of his job requirements."

Variable Pulley Cannot Slip Out of Adjustment

● A new variable speed pulley for the heating and air conditioning industry operates with the precision of a one-piece pulley and cannot slip out of adjustment, according to the Congress Drives Div. of the Tann Corp., Dept. AH&RN, 3750 E. Outer Dr., Detroit 34, Mich.

The pulley may be precisely adjusted in small increments, it was stated. Maximum variation of speed is 30% in five turns. The pulley design is claimed to eliminate parallel and angular misalignment. Concentricity of groove and bore eliminate thumping and overstressing on belt and pulley, it was stated.



"The new pulley will be of special value in applications where speeds of driven unit must be changed only seasonally, as in forced air furnaces, stokers, and year-round air conditioning units," the company said. "It also will be of value in applications where optimum operating speeds cannot be mathematically determined, as in replacement service for blowers and ductwork mechanisms," the firm concluded.

Rubber Boot Permits Tubular Heater Use For Defrosting

● A molded rubber boot is being offered by the General Electric Co., Dept. AH&RN, Schenectady 5, N. Y., which makes it possible to use tubular heaters for refrigeration defrosting and other applications requiring moisture protection.

Designed for operation from -40 to 185°F by protecting the heater terminal connections from frost or moisture accumulation, the rubber boot is free of taste or odor and is oil resistant, according to engineers at the company's Industrial Heating Dept. The boot is 1¾ in. long and 7/16 in. in diameter.

Tubular heaters with 0.260 and 0.315-in. diameters of steel, stainless steel, "Incoloy," "Inconel," and aluminum sheaths can be supplied with the new boot although special diameters are available on request.

Fasteners Aid Assembly Of 'Yukon' Walk-Ins

● A new method of fastening its sectional "Yukon" walk-in coolers which also greatly reduces set-up and installation time is now being featured by the La Crosse Cooler Co., Dept. AH&RN, 2809-17 Losey Blvd., S., La Crosse, Wis.

This method is now available in its standard line of high temperature coolers as well as the complete series of 6 and 8-in. insulated sharp freeze units.

"The 'Ease-O-Matic' system requires only the use of a hammer to position tightly and accurately the panels as they are assembled," the company said "In addition, this method still enables easy and rapid expansion of the cooler to a larger size or the dismantling of it to facilitate moving to other locations."

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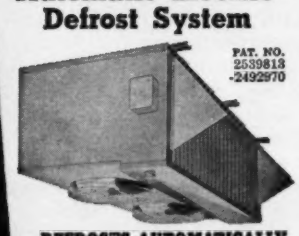

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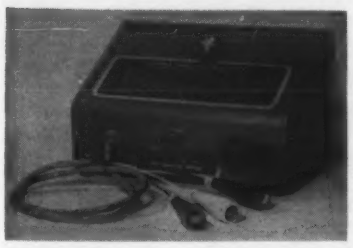


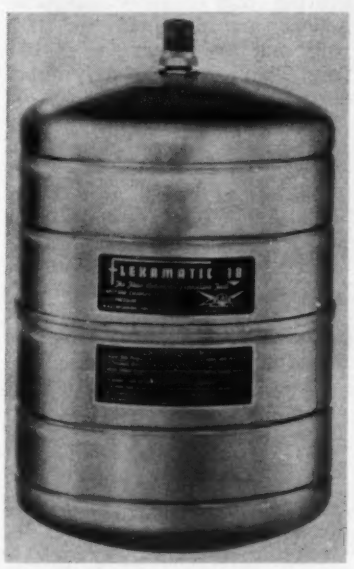
Tester Is for Potential Refrigeration Relays

● A relay tester "to be used for potential type refrigeration relays used on most air conditioners and remote refrigeration units of the single phase variety" is being offered by Frigid Equipment Co., Dept. AH&RN, 1338-40 St. Stephens Rd., Mobile, Ala.

The relay tester is claimed to be a practical way accurately to test potential type relays on units working on 115, 208, or 230 volts a.c. It "replaces trial and error methods, thereby saving time and eliminating guesswork," the company said.

"The relay tester is compact and easily carried along on the job by servicemen. It weighs less than 3 lbs. Full operating instructions are printed on the front panel."

Postpaid price is $37.95.



Water Heating Tank Is Expansible

● A new expansion tank for hot water heating systems has been announced by Flair Mfg. Corp., Dept. AH&RN, 1720 Atlantic Ave., Brooklyn 13, N. Y.

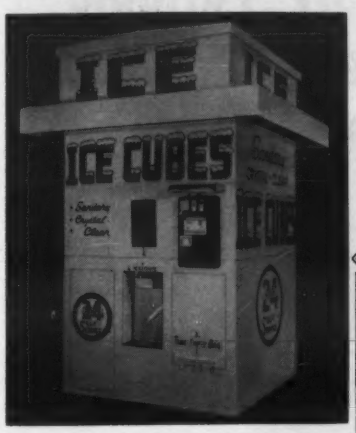
The tank is called the "Flexamatic." With it, the company said, "air problems and water logged conditions cannot occur for the reason that air and water can never come into contact. Flexamatic engineers have achieved a type of factory charged and sealed construction that has been proved foolproof."

Ice Cube Vending Machine Is 'Fully Automatic'

● A fully-automatic ice cube vending machine, the "Icelander," has been introduced by U.S. Vending Corp., Dept. AH&RN, 207 Centre St., New York 13, N. Y.

Especially designed for trafficked areas such as gas stations, shopping centers, and supermarkets, the Icelander makes its own ice cubes automatically, stores them automatically, and vends them automatically, the company said. Installation requires only a water line and a source of electricity, it was pointed out. Its capacity can be as much as 1,600 lbs per day.

"The machine regulates its own inventory, making and storing additional cubes as they are dispensed, according to U.S. Vendin. "Its operation is simple. The buyer inserts his coins which release a bag from a specially-designed automatic bag dispenser. He places the bag under the ice chute and presses a button which fills the bag automatically with 1¼-in. sanitary ice cubes."



The Icelander is built around a unified one-piece welded frame that stands 10 ft high.

Air Conditioner Designed for Compact Cars

● Introduction of an air conditioner designed exclusively for compact cars has been announced by Climatic Air Sales, Inc., Dept. AH&RN, 3030 Canton St., Dallas 26, Texas.

Over-all dimensions of the unit are: 12⅝ in. long, 5½ in. high, and 11½ in. deep. Cool air is distributed by a squirrel cage type blower with output of approximately 295 cfm, the company said. Unit has three round grilles in its face.

The new unit and the deluxe "Imperial" unit incorporate a newly-developed valve which "provides constant cooling to the temperature set by the rider regardless of town or country driving," according to the company. "A 'Pre-Cool' position on the control permits coil to operate cool without running fan."

The new unit is available immediately along with a complete line of air conditioners including a trunk unit, "Hot & Cold" unit which heats and cools, the Imperial deluxe unit for larger cars, and a self-contained and self-powered "Portamatic" trunk unit also for other installations such as houseboats, cabins, fishing barges, etc.

Jack Durret, president of Climatic Air, announced at the same time that the factory warranty on parts and workmanship this year has been extended to cover 12,000 miles or 12 months whichever occurs first.

Introducing Year-Round Air Conditioner Line

● A new line of "Rangaire" year-round air conditioning systems is being introduced to dealers by Cobell Industries, Inc., Dept. AH&RN, Cleburne, Texas.

The new Rangaire systems provide simplicity of operation and installation economy for both residential and commercial uses, according to the manufacturer.

Newly-designed condensing units in the Rangaire systems provide rapid heat rejection even under extreme weather conditions.

Portable Vacuum Pumping System Developed

● A portable vacuum pumping system, packaged in a service kit for air conditioning and refrigeration units, has been developed for production and sale by NRC Equipment Corp., Dept. AH&RN, 160 Charlemont St., Newton 61, Mass.

Called "Port-a-Vac," the system comprises a two-story rotary gas ballast vacuum pump and motor, incorporated in an easy-to-carry case. A rugged thermocouple vacuum gauge is also supplied.

"The system is designed for servicemen who must evacuate air conditioning and refrigeration units, either for installation or maintenance," the company explained. "It pumps these units to pressures of 50 microns of mercury or below."

GOLD SEAL
LINE TAP VALVES

by WATSCo

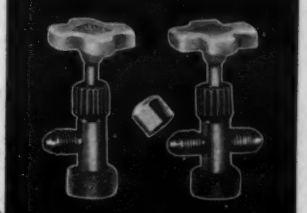
U.S. Pat. No. 2,827,913

Taps into any refrigeration line from 3/16" O.D. to 5/8" O.D. to charge, discharge, and test a system in minutes.

- PROVIDES A POSITIVE SEALED PORT AT A LOW COST.
- EASY INSTALLATION FROM THE TOP USING 2 PHILLIPS TYPE SCREWS.
- MAY BE INSTALLED WITHOUT REFRIGERANT LOSS EVEN WHILE UNIT IS OPERATING.
- FEATURES 3 POINT SEALING FOR MAXIMUM PROTECTION AGAINST LEAKAGE.

In addition to the above features you will find the Gold Seal Line Tap Valve cannot vibrate loose, will not distort the tubing and has no top heavy assembly. It requires a minimum of space and is tamper proof—Use with Gold Seal Control Valve CV-1G or CV-2G.

GOLD SEAL
SWIVEL CONTROL VALVE



CV-1G CV-2G

Designed to operate all Line Tap, Line Port, Can Tap and Access Valves, the Gold Seal Control Valve incorporates a swivel top, adjustable to an easy working position. Use part CV-1G (single port valve) or part CV-2G (double port valve).

For additional information, ask your wholesaler or write to Dept. N-21.

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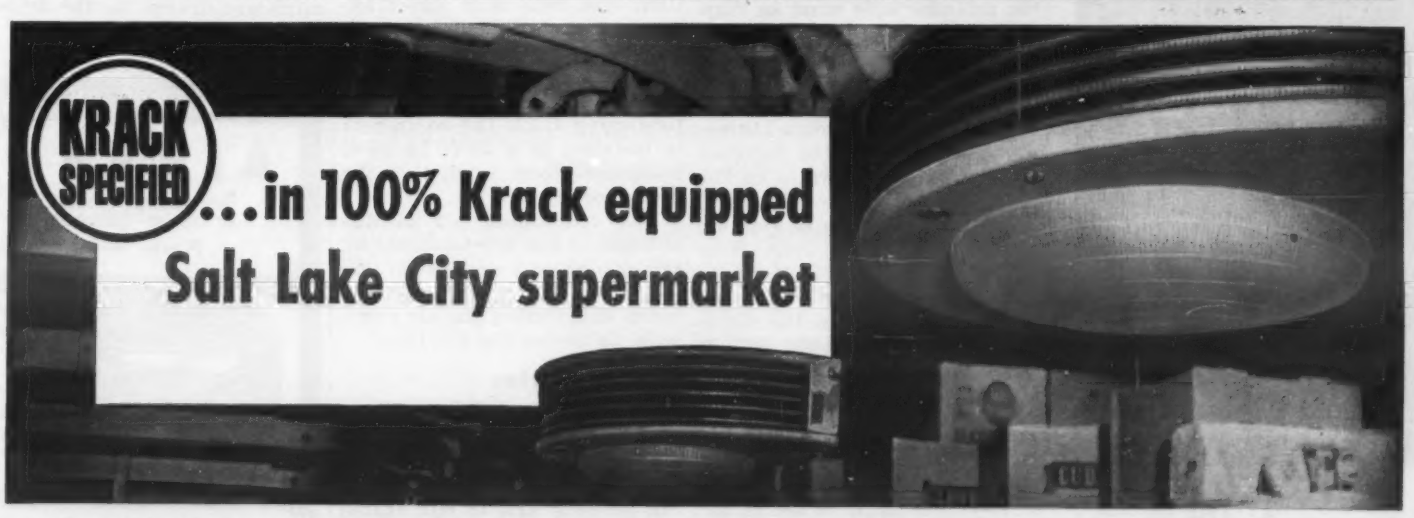

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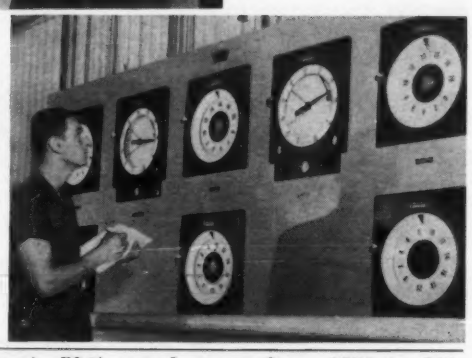
141 Tons of Refrigeration Supply Variable Temperatures Needed In Modern Tile Plant

CHILLICOTHE, Ohio—What is claimed to be the most modern floor tile manufacturing plant in the industry, recently opened five miles north of here, employs 141 tons of refrigeration in two production processes and to air condition its two-story office building.

Johns-Manville Corp. says the plant represents more than 30 years of accumulated research and engineering experience in the production of asphalt and vinyl asbestos floor tile products.

It consists of a single, one-story, steel, concrete, and corrugated asbestos-cement building on a 57-acre tract. It increases Johns-Manville floor tile production capacity by about 50% and serves an 11-state mid-western market.

FINISHED floor tiles travel through cooling tunnel on conveyor to inspection station at the new Johns-Manville floor tile plant at Chillicothe, Ohio. Air conditioning equipment is used in the cooling tunnel to reduce temperature of finished tile to desired packaging temperature.



ELECTRONIC controls govern movement of materials throughout a modern, straight-line, semi-automatic manufacturing process at the new Johns-Manville floor tile plant. Electronic control panel at right is utilized to maintain critical temperatures during calendering operations. A constant check of control dials is made to insure uniformity.

Of the total refrigeration capacity, 68 tons is used in a chilled water system to control the surface temperature of six calender rolls, 36 tons in a direct expansion system for a cooling tunnel that reduces temperature of tiles hot from punch pressing to a level suitable for packaging, and 37 tons for comfort air conditioning in 6,400 sq ft of work space, including locker room, lunchroom, office, and quality control laboratory.

Two Carrier hermetic, direct-expansion water chillers chill 250 gpm of water for the calender rolls.

Calender Roll Surface Temperature Varies From 85°F. to 190°

The surface temperature of the calender rolls must be variable from 85°F to 190°. The rolls are drilled and each has its own water circulating system. In order to obtain the roll surface temperature a three-way valve admits the required amount of chilled water to the circuit.

For fast warm-up at start-up or to prevent the rolls from becoming too cold upon an interruption of production, steam can be injected into the circulating system for each roll. A three-way valve located in the return line to the chillers is controlled by a modulating thermostat to prevent the circulation of hot water through the chillers.

The thermostat is set at 65° and allows only enough of the high temperature water to be blended with the chilled water leaving the chillers to maintain this temperature and prevent overloading of the chillers. All chilled water lines are insulated with Johns-Manville "Fibrocel VB" pipe insulation.

The second process refrigeration system is a direct-expansion air cooling system for a cooling tunnel. The system is designed to reduce the temperature of the tile leaving the punch press from 125° to 90°.

The tunnel is fabricated from removable 1⅛-in. thick Johns-Manville Transitop panels fastened to structural steel framework. When the outside air temperature falls below 45°, the refrigeration system is automatically shut off.

The ductwork to the air handling unit is arranged to permit the circulation of 100% outside air at this time. An automatic control system modulates the outside air, return air, and exhaust air dampers to maintain a uniform temperature.

The air handling unit is a Carrier "Weathermaker" with a direct expansion coil. The condensing unit is also made by Carrier.

The two-story office building is heated and cooled by a nine-zone multi-zone system. The air handling unit is a Marlo model CMZ size 20.2 with direct expansion cooling coils and 40 psig steam coils. The condensing unit is a York model #H256W with a capacity of 33 tons using R-22. The equipment is installed in a 20-ft by 24-ft equipment room located on the first floor.

The conditioned air is distributed to the interior zones by ceiling diffusers and to the exterior zones by ducts in window boxes distributing the air vertically up across the windows.

Each Zone Has Own Thermostat

Each zone is governed by its own thermostat that controls double splitter dampers in the air handling unit to mix heated or cooled air. All the circulated air is filtered by throw-away type filters.

A mixed air thermostat, located on the discharge side of the supply fan, modulates the outside and return dampers to maintain a mixed air temperature of 55°. At outside temperatures above 75°, the outside and return air dampers return to a pre-set position as established by a positioning switch.

Two Trane Co. No. RUA air-cooled refrigeration units and No. RL fan units supply conditioned air to the plant engineer's office and the quality control lab located in the manufacturing area. Heating coils are located in the ductwork to these offices for winter heating.

All the exterior ducts to the cooling tunnel system and all ductwork in the comfort air conditioning systems are insulated with Johns-Manville No. 414 "Spintex VS" insulation.

Manufacturing Area Heating System

The manufacturing area is heated by 14 Westinghouse type "HC" industrial heaters with throw-away filters. The heaters are mounted 16 ft high. A thermostat mounted 5 ft high cycles the heater fan on a call for heat.

A second thermostat mounted at the intake of the heater allows a two-position valve on the 40 psig steam coil to open if the room thermostat calls for heat and the thermostat at the unit is below setting.

If the air at the unit intake become warm due to stratification at the ceiling, the steam valve is closed even though the room thermostat calls for heat.

The manufacturing area is ventilated in summer by "Powerline" vertical exhaust units rated for six air changes per hour. Adjustable wall louvers around the perimeter of the building admit air to the building.

There are two Pangborn Corp. type "CM" intermittent, cloth filter, dust collectors installed within the plant for controlling the dust from operations in the pigment room and from dust created at the grinding, weighing, and mixing operations. One collector exhausts 5,400 cfm and the other collector exhausts 13,000 cfm.

The material collected in the hoppers of the dust collectors is emptied at the end of each shift by means of screw conveyors. A "Dustex" rubber valve prevents leakage of air back through the conveyor. The material is emptied into waste cardboard drums. As the drums are filled, they are taken from the plant to the waste area.

There are four additional exhaust systems exhausting 43,600 cfm. These systems control fumes and vapors from mills, calenders, etc.

The make-up air for the exhaust systems is supplied by the pre-punch colling system. This system has a two-fold purpose; it cools the tile sheet before it is fed to the punch press and also to heat make-up air in the winter.

There are two sets of horizontal steam coils in the ductwork with the air passage vertically downward. A ductstat located on the leaving side of the second coil modulates a steam valve. This coil has the capacity to heat the incoming air from 45° to 80°.

Ductstat Opens Steam Valve

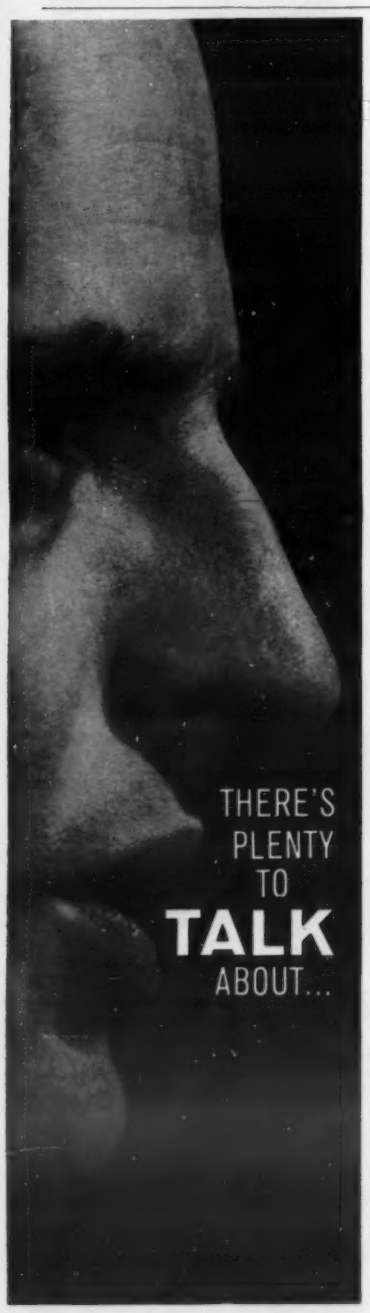
A ductstat located on the entering side of the first coil controls an on-off steam valve. This controller opens the steam valve whenever the air entering the first coil is below 45°.

Cleaver-Brook package boilers provide steam for process, heating, and domestic use. The boilers are designed for 200 psig and are operated at 165 psig. They are completely automatic with a total capacity of 10,000,000 Btuh.

The deaerating heater and storage tank, domestic hot water heater and storage tank, condensate receiver, and steam and condensate piping is insulated with Johns-Manville "Thermobestos." "Metal-On" pipe insulation was used in areas where the pipe covering would encounter abuse.

The process chilled water and chilled air systems were designed and installed by Capitol Refrigeration of Columbus.

Office air conditioning, building heating, dust collection, and steam plant were designed by Graham, Anderson, Probst, & White of Chicago. Huffman-Wolfe of Columbus installed all but the dust collection equipment, which was put in by Young & Burke of Cincinnati.



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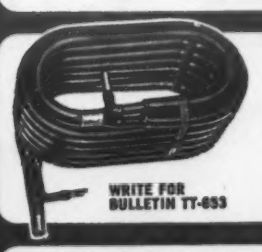

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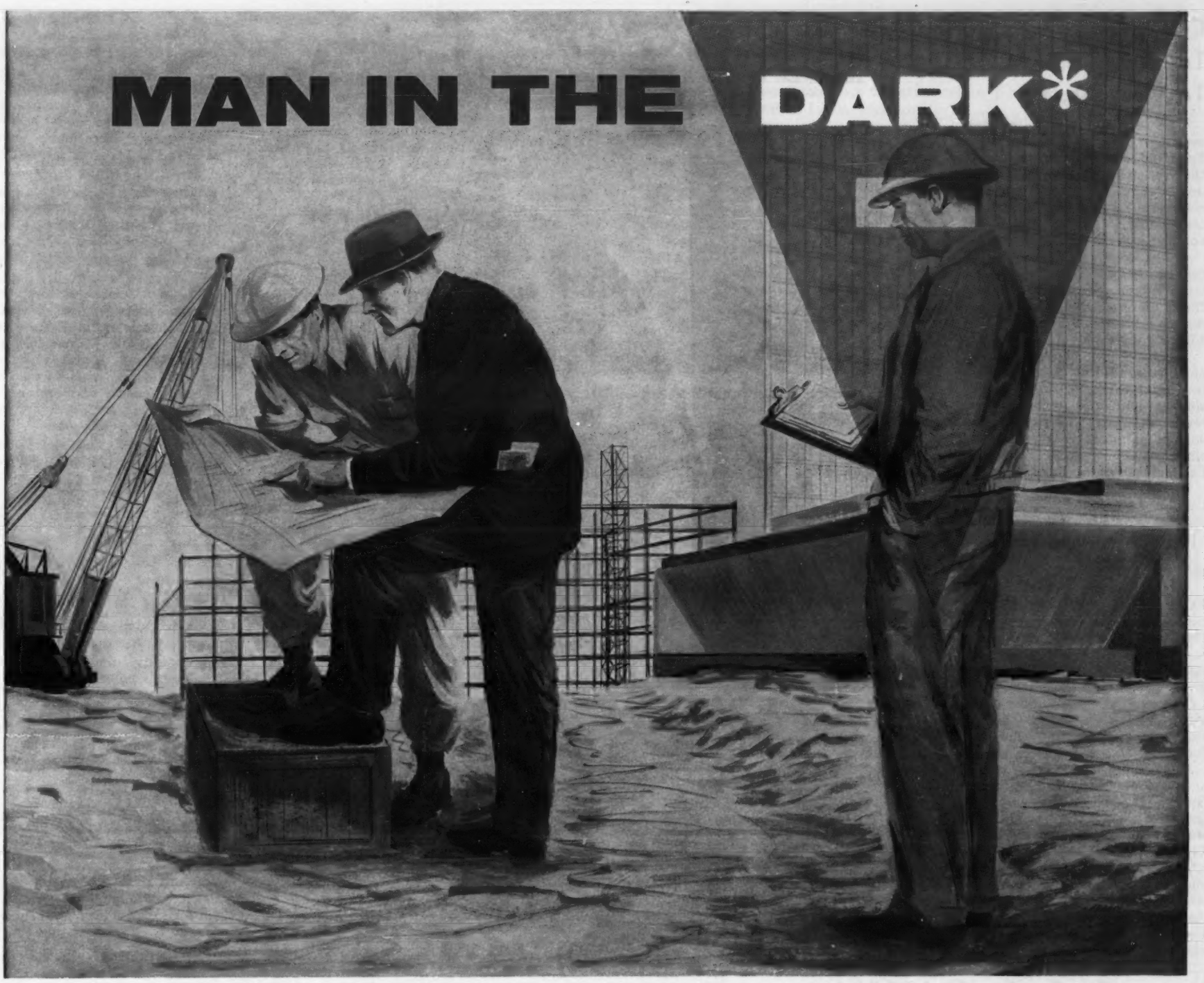

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California Joint Training Council To Meet Feb. 10

LOS ANGELES — A special meeting has been slated for Feb. 10 for representatives of the recently-formed California Joint Training Council of the refrigeration and air conditioning industry to discuss topics confronting the industry.

Called by James Scatena of the Scatena-York Corp. who is temporary council chairman, the conference has been set for Santa Rosa prior to the California Trades meeting in Fresno.

Proposed legislation to be submitted to the state legislature later this year will be considered and discussed by the representatives. The recommendations call for greater responsibility by contractors under the California License Law.

In addition, union and contractor representatives of the council will also take up the matter of licensing and bonding of air conditioning and refrigeration contractors. Such a proposal was recently made by Peter T. Schoemann, general president of the United Association, AFL-CIO, as a means to protect responsible contractors as well as the general public from unqualified contractors.

They will also take under consideration the situation of the various crafts who do servicing for the refrigeration industry.

Gene Ballard, business manager of Refrigeration Fitters, Branch Local #250, who is temporary council secretary, states that members of the United Association, as well as representatives from local chapters of the Refrigeration & Air Conditioning Contractors Association (RACCA) are being contacted to attend the conference.

Manufacturers' Shipments of Unitary Conditioners For Third Quarter and Nine Months

ARI UNITARY AIR-CONDITIONER SECTION'S CONDENSED SUMMARY BY SIZE of Manufacturers' Shipments

THIRD QUARTER, (July-September, 1960)

Size	—By Condenser Type— Air of Evaporatively Cooled	Water Cooled	Total Units	% Change from 1959
Under 27,000 Btuh	14,564	26	14,590	+ 19
27,000-32,999 Btuh	6,386	10	6,396	+ 21
33,000-41,999 Btuh	20,372	1,294	21,666	— 14
42,000-53,999 Btuh	9,525	690	10,215	+ 39
54,000-64,999 Btuh	8,504	2,829	11,333	+ 7
65,000-96,999 Btuh	4,401	1,269	5,670	— 10
97,000-134,999 Btuh	2,075	980	3,055	— 9
135,000-184,999 Btuh	866	609	1,475	— 2
185,000-249,999 Btuh	327	574	901	+ 11
250,000-319,999 Btuh	65	282	347	— 7
320,000-379,999 Btuh	61	300	361	— 1
380,000 Btuh & over	20	131	151	+ 30
Total	**67,166**	**8,994**	**76,160**	+ 3

JANUARY-SEPTEMBER, 1960 (9 months)

Size	—By Condenser Type— Air of Evaporatively Cooled	Water Cooled	Total Units	% Change from 1959
Under 27,000 Btuh	43,372	159	43,531	+ 16
27,000-32,999 Btuh	20,415	40	20,455	+ 15
33,000-41,999 Btuh	76,006	5,378	81,384	0
42,000-53,999 Btuh	32,241	3,947	36,188	+ 59
54,000-64,999 Btuh	29,445	11,553	40,998	+ 10
65,000-96,999 Btuh	13,504	5,672	19,176	+ 4
97,000-134,999 Btuh	5,758	4,167	9,925	— 5
135,000-184,999 Btuh	2,137	2,271	4,408	+ 6
185,000-249,999 Btuh	960	1,765	2,725	+ 29
250,000-319,999 Btuh	177	1,072	1,249	— 4
320,000-379,999 Btuh	196	827	1,023	+ 13
380,000 Btuh & over	91	481	572	+130
Total	**234,302**	**37,332**	**261,634**	+ 12

This condensed summary by size includes shipments of:

1. Air conditioners (except window and wall types) with or without condensers and refrigeration chassis.
2. Year-round air conditioners—with or without condensers.
3. Heat pumps (except room air conditioners) self-contained and other than self-contained.
4. Split systems—air conditioning condensing units **only.** It does **not** include shipments of air conditioning coils with or without blowers.

EXPORT SHIPMENTS—The total figure includes export shipments of 1,870 units for the third quarter and 7,258 units for January-September, 1960.

Reporting companies (58): Airtemp Div., Chrysler Corp.; Albion Div., McGraw-Edison Co.; Amana Refrigeration, Inc.; American Furnace Co.; American-Standard Air Conditioning Div.; American-Standard Industrial Div.; Arkla Air Conditioning Corp.; Armstrong Furnace Co.; Carrier Corp. (incl. all mfg. div.); Cleveland Steel Products Corp.; Cobell Industries, Inc.; Coleman Co., Inc., The; Columbia Special Co., Inc.; Crane Co., Plumbing Heating & A/C Group; Curtis Mfg. Co.

Fedders Corp.; Forston Co., The; Fraser & Johnston Co.; Frick Co., Inc.; Friedrich Refrigerators, Inc.; Gaffers & Sattler Div., Utility Appliance Corp.; General Electric Co.; Goettl Brothers, Metal Products Inc.; Hall-Neal Furnace Co.; Heat-X, Inc.; Heil-Quaker Corp.; Holly-General Co.; Hupp-Perfection Industries; Hupp-Typhoon Air Conditioning Co.; Hupp-Typhoon Heat Pump Co.

International Heater Co.; International Metal Products Div.; Iron Fireman Mfg. Co.; Janitrol Heating & Air Conditioning Div.; Laurel Products Corp.; Lennox Industries, Inc.; Majestic Co., Inc., The; Mathes Co., The; Melchior, Armstrong, Dessau Co., Inc.; Miami Products, Inc.; Mueller Climatrol Div., Worthington Corp.; National Thermatic Corp.; Olsen Mfg. Co., The C. A.; Peerless Corp.; Rheem Mfg. Co.

Southwest Mfg. Co.; Stewart-Warner Corp. U. S. Machine Div.; Thatcher Furnace Co.; Therm-Air Mfg. Co.; Trane Co., The; Tuck-Aire Furnace Co.; United States Air Conditioning Corp.; Westinghouse Electric Corp.; Williamson Co.; Worthington Co.; Wright-Temp Mfg. Co., Inc. (beg w/ Sept.); York Div., Borg-Warner Corp.; Zink, John, Co. (beginning with July).

World Trade Corner

RANCO, INC's program for expanding its overseas operations is generally proceeding on schedule, A. M. Hoover, president and chairman, reports.

Additions to the Scottish subsidiary are nearing completion while the new plant at Plymouth, England should be ready for operation by late spring.

Tripling capacity of the Hockenheim, West Germany plant is under way. The new facility at Oligate Comasco, Italy has been delayed by many months of torrential rains, but it should be ready for operation by early summer, he said.

He added that shipments by overseas subsidiaries during the last three months of 1959 were above those of last year, though sales did not reach the anticipated volume.

* * *

GARRETT CORP. has announced formation of Breguet-Garrett S.A. in France to manufacture air conditioning systems designed by Garrett for the net jet aircraft being developed in France. French industrialist Pierre-Louise Breguet is president-director general of the new company and Pierre Atlan chief engineer.

* * *

AUSTRALIA - FLUOROCARBON REFRIGERANTS, with the trade name "Forane" will be manufactured in Australia at a new plant being built by Pacific Chemical Industries, a company owned jointly by Australian Cream of Tartar and Societe D'Electro-Chimie, D'Electro - Metallurgie et des Acieries Electriques D'Ugine, of France.

Swift & Co., Ltd. has been appointed the sole Australian selling agents for the new Forane refrigerants.

* * *

WESTINGHOUSE ELECTRIC INTERNATIONAL CO. has announced new licensees to produce air conditioning equipment in France and Hong Kong.

L'Air Conditionne of Chatou, France will broaden its line of window-type air conditioners under a license and technical assistance agreement with Westinghouse.

The China Cold Storage and Engineering Co. of Hong Kong will make a line of air conditioning units ranging from room air conditioners to packaged and custom built apparatus.

N. A. Anderson has been elected president of Westinghouse Electric Co. S.A., which covers Latin America and Canada from Santurce, Puerto Rico. Anderson was formerly a Westinghouse distributor in Havana.

* * *

TRANE CO. has announced the election of Robert P. Yeomans as vice president with responsibilities for foreign operation except Canada. He will also head two new subsidiaries, Trane S.A. in Fribourg, Switzerland to serve the European common market, and Trane Ltd. in London, England.

R. P. Yeomans

Yeomans has announced the opening of a Caribbean sales office in San Juan, Puerto Rico with Jacques Dreyfuss as manager.

* * *

ROBERTSHAW-FULTON CONTROLS CO. has formed a new subsidiary, Robertshaw Orient, Ltd., to manufacture automatic controls in Tokyo, Japan. L. P. Handy is president and managing director of the new subsidiary and Tadashi Shuto of Tokyo is vice president.

Robertshaw also recently formed a subsidiary in France for the same purpose. Known as Robertshaw-Madec, it is headquartered at Servance, Haute Saone. Alfred Clerget is president and general manager.

CEC Booklet Tells How To Prepare Firm Brochure

SPRINGFIELD, Ill. — A new booklet, "Preparation of a Consulting Engineer's Firm Brochure," has been published by the Consulting Engineers Council, national organization of consulting engineers in private practice, with headquarters here.

The 24-page booklet is being made available to member firms, as a "blueprint" to follow in compiling individual firm brochures, according to Larry N. Spiller, CEC executive secretary. It contains excerpts and ideas compiled from actual published brochures of a number of consulting engineering firms throughout the country.

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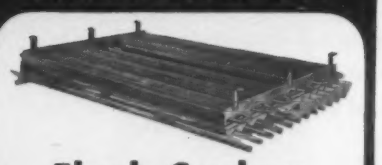

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Some Territories Still Open For Manufacturers Representatives

Viking Copper Tube Elevates Frank Higham

CLEVELAND — Frank Higham, 40-year-old British-born metallurgical engineer who became director of manufacturing of the Viking Copper Tube Co. in 1957, has now been elevated to vice president.

F. Higham

"Higham's contribution to our expansion program has been most invaluable," stated Bailey I. Ozer, Viking president, "and in his new position he will play an even larger part in an important new Viking development soon to be announced."

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TECH CENTER

by
FRANK J. VERSAGI

Refrigerant 22: Hero or Villain? (4)

Some manufacturers believe the feeling against 22 is just a carryover from the early days. "Their early experience was clouded because hermetic motors and hermetic compressors were not designed for R-22."

Others think there is a more practical answer: "The dislike for R-22 is not so much a matter of statistics as it is a matter of inconvenience. Servicemen don't like to have to carry around two kinds of refrigerant; they would prefer to need only one drum."

It's not quite that simple, however. Resistance to the use of R-22 continues for reasons which to the service people are valid and noteworthy.

Industry Veteran Sums Up Problems

Hear what S. R. Thompson of Thompson Refrigeration Corp., Chicago, has to say.

"We have job after job to back up these opinions regarding the performance of Refrigerant-22:

- It does attack motor windings in hermetic units and decimates their life—
- Compressor oils get heated very close to the breakdown point in normal use—
- Compressor valves run very hot and fail frequently—
- Higher back pressure jobs, like package air conditioners, have much less trouble because of less superheat of suction gas and cooler operation—
- Low temperature single-stage jobs with a high suction superheat will give a costly service headache—even good-performing systems have been ruined by temporary bad conditions like gas shortage, high head pressure, thermostatic expansion valve set too lean—
- On low temperature systems, we know that artificially cooling the suction gas indirectly or by injection from the system helps very much, but the costs and service requirements override any benefits—
- Refrigerant-22 is extremely efficient and desirable but we are using it only on high temperature jobs; we mix it with 12 on all other applications."

Thompson's opinion is not to be discounted; he has years of experience with hundreds, even thousands, of systems behind him, and he has neatly summarized the complaints of many in the service industry.

Another Viewpoint

Another serviceman, Frank Danek of Owosso, Mich., reports his experience from a different point of view:

"Our experience is with larger freezers, mostly air cooled, although even 8-to-25-cu ft domestic freezers give us a high number of burnouts.

"The way I see it, the biggest headache is not getting rid of the heat of compression and the evaporator heat. We find that fan failures and restricted (dirty) condensers invariably lead to burnouts, especially on R-22 jobs with cap tubes, and driers or strainers.

"When the compressor just can't pump any more heat, the varnish starts to loosen on the stator and the insulation in the laminations loosens and starts to plug the strainer or end of the cap tube. We can show you completely plugged ends of cap tubes loaded with varnish or sludge.

"Refrigerant-12 will do the same, but I would say that burnouts with R-22 occur about 10 times as often."

Around the country, serviceman after serviceman has reported similar experience. E. Vernon Black of Uniontown, Pa. sums it up by pointing out that poor housekeeping, especially in supermarkets, is the ultimate source of the difficulties.

When manufacturers point out that this proves it is not the refrigerant at fault, the answer usually is, "Units are never applied in laboratory or ideal conditions; your refrigerant must be able to do the work in real life, and real life means dirty condensers, poor housekeeping, and all the rest."

Majority Service Opinion Is Anti R-22

There is no question about it: majority service opinion is anti-22. But opinion is not unanimous. There are service people who have come to accept Refrigerant-22 as just another refrigerant with advantages and disadvantages which must be considered in each application.

One West Coast contractor has installed between 2-and-3,000 R-22 compressors since 1955. *He has never made a single in-warranty claim against the supplier* (on the extended 4-year portion of the warranty)!

His secret seems to be complete awareness of the properties of R-22 and therefore an installation and repair procedure which precludes much of the difficulty which might otherwise be encountered. His operation will be described in detail in a future issue of the NEWS. Briefly, he takes extreme care in installation—uses triple evacuation, with more than one vacuum pump; purchases only refrigeration grade, dried, degreased, and capped copper tubing—even in hard drawn; gives every machine a 30, 60, and 90-day inspection after installation, paying special attention to the color of the oil.

One supermarket chain has records which show much longer life on R-22 units than on R-12 equipment.

Another claims that it has less service calls on R-22 than on R-12 machines.

Some Use Mixture Of R-12 and R-22

There are users and servicers of cooling equipment who claim that poor oil return is their biggest headache when they use R-22. Many of these people like to mix a little R-12 with the 22 to eliminate this difficulty.

Authorities like John Bopp of Ansul Chemical Co. counter that this practice "is an evasion of the real problem. While there is no chemical reaction between Refrigerants 12 and 22, the system should contain only the refrigerant for which it was designed," Bopp contends.

"Too low a velocity is usually the trouble, due to oversized suction lines."

Over and over we hear the statement: "In properly designed and applied systems, Refrigerant-22 offers no problems."

If that is true, then there are thousands of improperly designed and improperly applied system employing R-22.

Repeatedly we get from servicemen: "Properly applied or not, R-22 has basic properties which make it too much of a nuisance to put up with in spite of some engineering advantages and economies for the manufacturer."

If that is true, then many of our industry's brightest engineers and production people are indifferent to the plight of their customers and their middlemen.

We suspect the truth is somewhere between these extremes, and we express our opinion on the editorial page this week.

(For a comprehensive comparison of Refrigerants-12 and 22, nothing beats the late Paul Reed's reprint on the subject, available from the NEWS for 75 cents.)

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

WHAT . . WHEN . . WHERE

— A Guide to Coming Events of Interest

Air Conditioning & Refrigeration Wholesalers
Feb. 10-12, Chicago.

American Society of Heating, Refrigerating & Air-Conditioning Engineers, Inc.
Feb. 13-16, Chicago.

National Association of Refrigerated Warehouses, Inc. and Refrigeration Research Foundation
March 27-30, Mark Hopkins hotel, San Francisco.

Gas Appliance Manufacturers Association
April 5-7, Boca Raton hotel, Boca Raton, Fla.

National Association of Electrical Distributors
April 29-May 3, Detroit.

Industrial Heating Equipment Association, Inc.
May 21-24, The Homestead, Hot Springs, Va.

The Institute of Boiler & Radiator Manufacturers
Week of June 12, Seaview Country Club, Absecon, N. J.

American Society of Heating, Refrigerating & Air-Conditioning Engineers, Inc.
June 26-28, Denver.

International

Tenth Electrical Engineers (ASEE) Exhibition
March 21-25, Earls Court Exhibition Hall, London, Eng.

Second International Refrigeration & Air-Conditioning Exhibition and Technical Convention
April 11-14, Earls Court, London, England.

Heating, Ventilating & Air Conditioning Exhibition (HEVAC)
Sept. 26-Oct. 6, Olympia, London, England.

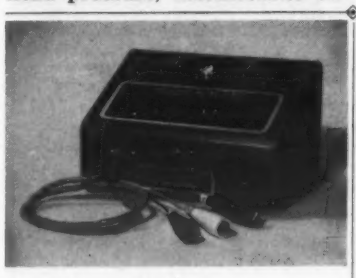
International Factory Equipment Exhibition
Nov. 13-18, London, England.

Eugene Sloane Writes 2 'House Beautiful' Articles

DETROIT — Two articles on treatment of air for better health have appeared in the January and February issues of *House Beautiful* magazine.

Both were written by Eugene A. Sloane, editor of *Air Engineering,* which is the companion publication of the NEWS.

The January article told "How To Protect Yourself from Air Pollution." The February article discussed the question "Can Negative Ions Added to the Air You Breathe Improve Your Well-Being?"



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Packaged Multi-Zone Air Conditioners

How One Manufacturer Goes About Designing New Line (2)

How does a manufacturer go about designing a new line of air conditioners? What factors are considered in the selection of components like compressors and coils, evaporators and controls? How much weight is given to design considerations, to application engineering?

In this series of articles, Alfred D. Sullivan, development engineer for American-Standard Industrial Div., offers a lucid account of the birth of a new product.

By Alfred D. Sullivan, Development Engineer, American-Standard Industrial Div.

Selecting Compressor

It is difficult to say which of the items making up a packaged air conditioner is the most important, since the interactions of the major sub-assemblies are supplementary in determining performance of the unit as a whole. The compressor, however, has the most moving parts and the greatest variety of duties; hence, its proper selection has a great bearing on ultimate conditioner performance.

Among determinations made in compressor selection are type of compressor, type of valve, type of drive, and type of capacity control. The first requirement established for the compressor in the new packaged multi-zone line was that it be semi-hermetic. Having the drive motor and compressor in the same housing is highly desirable for this element of the unit.

(A grocery chain once kept records over several years and found that more than 20% of their service calls involved the drive assembly of belt-driven compressors. This kind of information, gathered from many sources, together with other recorded data ruled out belt drive.)

Direct drive through a flexible coupling was also considered, but was eliminated as a possibility because of the close alignment tolerances required. These must be lined up within a few mils or unpleasant vibration is likely to result. Even where perfect alignment is achieved and careful doweling of the assemblies is performed at the factory, motor and compressor frequently shift a little in transit, distorting the flexible coupling. Leaky seals, too, are occasionally experienced with the "open" unit. Use of the semi-hermetic compressor avoids all these potential dangers.

Valves for large compressors of the type used in 25, 30, and 40-ton packaged multi-zone air conditioners cannot be the infinitely durable flapper valves which are used in small refrigeration pumps. Where flapper valves have been tried for these severe services, continued down-time and trouble has been the result. The plate type valve is generally favored in most large compressors of newer design.

Other well-thought-of features which contribute to compressor quality include pressure lubrication, removable clinder sleeves, crankcase heaters, and bearings which are replaceable in the field. The crankcase heaters are wired to be energized whenever the compressor shuts down. They prevent undue dilution of the lubricant which may result when refrigerant enters the crankcase through leaking expansion or discharge valves.

Capacity control is a "must" in a quality multi-zone design.

The unit should be capable of operating at fractional capacity without excessive starting and stopping. The capacity control mechanism selected is such that the compressor starts unloaded and remains unloaded until normal operating oil pressure has been achieved. In this type of system, the motor's heavy starting current is felt only for a brief instant, resulting in minor draw on the power line and minor effect on adjacent users of power.

Further to improve starting characteristics, the compressor has nine power terminals brought through the casing. Three terminals are "common" and three each of the remaining six are connected to one-half the motor windings. When operated with two magnetic motor starters, the arrangement is known as "part-winding" or "increment" starting.

Whether or not the compressor starts on the first step is relatively unimportant (although the unloaded compressor usually does) since the intent is to apply starting current in two steps separated by action of a time delay relay which is part of the control hook-up.

Choosing Condenser

The condenser might seem to be the piece of equipment easiest to select. The air conditioner manufacturer who chooses to avoid the problems of designing and building his own condenser need only provide heat rejection and space limitation specifications to several quality suppliers available. Within a short time, he will have a variety of proposals to choose from.

Upon further examination, however, this proves to be an over-simplified concept. There are several philosophies advanced among the high-quality condenser suppliers; each must be investigated thoroughly by the packaged air conditioner manufacturer to insure the selection most likely to prove completely satisfactory in service.

A basic decision concerned a choice between shell-and-coil and shell-and-tube construction. Analysis revealed, for example, that shell-and-tube units can be cleaned mechanically; yet further investigation disclosed that a simple acid treatment does a good cleaning job on either type. Shell-and-tube configurations, however, usually lend themselves to a choice of pass arrangements; for example, four-pass may be selected for 85° cooling water or eight-pass for 75° water. Thus the velocity through the tubes can be maintained at or near the value for optimum heat transfer.

Another advantage of using the shell-and-tube type is the ability to replace an individual tube should it be eroded through by silty water or burst by a freeze-up condition. Freeze-up can occur as a result of cold ambient conditions or through inadvertent and rapid release of refrigerant from the high side of the system.

All the factors investigated tended to favor the shell-and-tube condenser design; this configuration was selected for the new line of packaged multi-zone air conditioners.

Condenser Rating

In an analysis of condenser design, it becomes clear that higher capacities accompany higher water velocities. Thus, a condenser of stated heat exchanger surface performs 10% better at 8 feet per second than at 6 fps water velocity. To put it another way, the surface could be reduced 9% with proportionate initial cost savings if the higher velocity were accepted as a basis for the nominal or nameplate rating of the condenser.

The fallacy in this line of reasoning becomes apparent, however, when the condition of the cooling water in a given system brings about rapid scaling.

Should the encountered scaling factor be 0.001 or higher (compared with the normal 0.0005 design figure), it becomes impossible to hold the desired condensing temperature, even with erosive water velocities in excess of 10 fps.

Depending on the prevailing water quality and the sensitivity of the system to high head pressures, the nameplate water velocity should be less than 6fps. Hand-in-hand with reasonable tube velocities go low water pressure drop and reduced pumping cost.

Condenser Considerations

Ample pump-down volume in the condenser is a necessity for rapid servicing of the system. An adequate gas dispersion space at the top of the condenser is another important requirement to insure full utilization of surface at all loadings.

Other desirable features are a purge valve, which can also serve as a water valve pilot attachment point; ports for connection of a boiler-type liquid level glass is desired; and a charging connection on the liquid valve to permit liquid refrigerant to be drawn quickly into the system without risk of compressor damage. The charging connection prevents the kind of damage that can occur when refrigerant is admitted through the suction line valve.

(To Be Continued)

Sesco Names Polsey

JAMAICA, N. Y. — Sesco Corp., distributor for Chrysler Airtemp, has announced the appointment of Harry Wright Polsey as general manager in charge of sales and marketing.

Polsey was formerly sales manager with RCA Service Co. in Chicago, Columbus, Ohio, and New York City.

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FREE PARKING AND FAST COUNTER SERVICE AT THESE 4 BIG WAREHOUSES

Airtemp Beefs Up Line--

(Continued from Page 1, Col. 1)

Airtemp vice president in charge of marketing.

There are four 1961 series of Airtemp room air conditioners: the "Imperial" with three models, the "Power King" with 11 models, the "Titan" with four models, and the "Casement" with two models.

It is the Imperial models that the dash of "architectonics" in the form of a decorator panel has been added. These panels can be painted, covered with wall paper, drapery fabric, wood grain, or even messages, such as seasonal decorative designs.

An embossed, golden panel is standard with each Imperial unit. However, the reverse side of this aluminum panel (measuring 22 in. wide by 8⅝ in. high) is smooth and wall paper, fabrics, plywood, or other material can be attached with any type of adhesive.

However, probably even more newsworthy in the Imperial line are some engineering innovations. When the unit is in use, the front panel is pulled forward approximately 2 in. from the return air grille. When the unit is not in use, this decorative panel is pushed closed and forms the second stage of a "weather seal" designed to keep out the cold and to permit the unit, with its decorative possibilities, to remain in the window year round.

Both the Imperial and Power King models have the "air door" feature. This is an adjustable supply air outlet by which air flow can be deflected from 15 to 90 degrees, directing it towards the ceiling or straight across the room. Movable louvers in the door permit complete lateral air direction.

The air door and a new evaporator squirrel cage blower are claimed to provide 50% more air thrust and at the same time reduce operating noise. All 1961 Airtemp units have two-speed fans.

The new top-capacity Titan series model has 28,000 Btuh capacity and delivers 650 cfm of air and has a 3-hp compressor. It is available in both 230 and 208-volt models.

There is also a 23,000 Btuh model in the Titan series. Other features include automatic thermostat, a 2-speed fan, both vent and exhaust controls, a 4-way direction of cool air, and sound absorbent features.

The two casement models are marked by a patented design which permits installation without removal of glass panes, or expensive alteration to the casement frame. All that is needed are four screws and a screw driver.

In the installation procedure, the interior screen is removed from a window. The unit is then placed against the window, and attached with screws through the tapped holes which held the screen. This eliminates any need to drill holes in the frame. The unit is 36¾ in. high and 16¾ in. wide, the standard size for casement windows. Where such windows are higher, a panel is attached to the top of the unit and the window frame.

Casement window models will be available in capacities of 6,000 or 7,700 Btuh 115-volt models.

In other design changes this year, operating controls on the Imperial and Power King series have been simplified. The control center is located on the right side of the air door for better accessibility, and the controls are hidden when the door is closed. Location of the controls improves visibility and levers with snap-action simplify operation control.

Eleven models in the line will be equipped with removable, washable air filter media which has a permanent germicidal additive.

A special effort has been made to improve the outside (condenser) grille appearance, with a well-designed aluminum grille being used on the sides and back, so constructed as not to streak the building.

CHANGEABLE decorator panel and weather seal are features of Airtemp Imperial room air conditioner. Draperies, wood grain, wallpaper, or paint can be applied to front panel. When air door and front panel are closed, a weather seal is formed.

TITAN room air conditioner offers 28,000 Btuh. Bigger than anything built last year, it is designed for hot, southern areas and commercial applications.

Tyler--

(Continued from Page 1, Col. 1)

with double-duty front opening.

—A two-deck frozen food case with separate refrigerated system for the upper shelf.

—Larger-tonnage condensing unit racks incorporating a new control panel.

—An all-weather shroud for outdoor condensing units.

A coming NEWS story will describe the new products in detail.

The professional handling of the sales conference got a mixed reception from almost 300 attendees, but there was no questioning that it was different. Some examples:

—Every time R. L. Tyler, Sr., president, was introduced, a band played "Hail To The Chief"; on one occasion MacDonald personnel ordered the guests to stand—which they did with enthusiasm.

—The first walk from the hotel to the Indiana Club where business sessions were held was a "Grande Marche" with a band leading the way and with the procession stopping traffic as it crossed streets.

—Five huge panels on the stage rotated as speakers appeared; letters on the panels spelled out sales messages and mottoes or identified the speaker who walked out from behind them.

—Alternating spotlights, a band playing intermittently, products raised on a hoist to the accompaniment of a drum roll—all these kept the Tyler distributors and salesmen alert and interested.

—Following the carefully-prepared script, the three-day sales congress kept right on time, including meals and entertainment sessions. One weakness, commented upon by several, was that the necessity of reading script took away some of the color and spontaneity from a couple of Tyler's better speakers.

Business sessions were interspersed with talks by well-known speakers in and out of the industry.

One of the most important and pregnant sessions was not in the script; it was the frank exchange of information which took place in a meeting attended only by distributors and managed by distributors.

This session and others will be described in future NEWS stories.

ARW--

(Continued from Page 1, Col. 3)

mer, ARW president. These are intended to broaden the basic objectives of the association, revise the selection of officers, and provide a new method of divisionalizing regional operations.

Business meetings are scheduled for Saturday and Sunday, Feb. 11 and 12. During these sessions, ARW legal counsel will present his views on the "OEM for resale" problem, looking at it from both the legal and moral aspects.

Austin Kelly III of the National Employe Relations Institute will present a seminar on incentives, profit sharing, and pension programs. Three panels will discuss current business.

Among other events scheduled are an awards luncheon Saturday noon, annual reception and dinner-dance Saturday, a brunch Sunday noon, and a party Sunday night.

Better Product, Wider Market, Weather (?) Could Push Room Air Conditioner Sales To 1.6 Million

NEW YORK CITY — There are factors in the room air conditioner market this year which could push retail sales to at least 1,600,000 to 1,800,000 units, declared Paul Augenstein, president of the Airtemp Div., Chrysler Corp., at a press conference marking the introduction of Airtemp's new line of room units.

Among the factors which Augenstein views as favorable for an increase in sales are (1) improvements made in the ease and speed with which installations can be made, particularly on a "do-it-yourself" basis; (2) the probability that the weather in the height of the selling season won't be as unfavorable as it was in 1960, coupled with the fact that room air conditioners are becoming less of an impulse item every year; (3) the increased scope of the market made possible with large capacity units.

Commenting on the effect of climatic conditions upon sales, Augenstein said that "while a cool summer in major market areas might depress sales 25 to 30%, the upswing in sales when prolonged hot spells are encountered will often be much greater."

On the matter of the effect of new and improved methods that will make possible faster and easier installation, Augenstein said that market surveys had indicated that possibly as high as 60% of all of the room air conditioners sold in 1960 were installed by the customers themselves. This factor will also be of importance should a prolonged spell of hot weather hit this year, since many sales have been lost in previous years when installations could not be made before cooler weather set in.

"Airtemp is in the room air conditioner business to stay," said Augenstein. "While Airtemp manufactures all kinds of air conditioning equipment, we believe that the room unit has a continuing and important place in the market, particularly in residential, and to some degree in the commercial field.

"We also believe there are areas for basic improvements in room air conditioners as consumer products. The public wants improved appearance of the unit, both the indoor and outdoor sections. The public also wants freedom from cold air leakage or drafty air distribution, and a desire for more efficiency, high capacity units has been indicated. We have made many changes in our 1961 line that are in line with these needed basic improvements."

Queried as to Airtemp's attitude on "annual model changes," Augenstein said that he did not favor "mere face lifting," but that Airtemp would be always alert to the possibility of making honest improvements. Much model changing, he pointed out, comes about because of the type of results achieved with previous models.

While there is somewhat a definite trend to high capacity models, particularly with people finding that they can air condition several rooms with one of the higher capacity models, Augenstein said that there is some trend to somewhat smaller units for bedrooms, because of the "quietness" factor.

He sees no likelihood of any great changes up or down in the general price structure of room air conditioners during 1961.

YOU THAT BIG FISH ...we're looking for?

We're casting for king-size sales representation in key spots, Coast to Coast

Drayer-Hanson's major realignment as a Division of Hi-Press Air Conditioning of America, Inc., is opening many prime areas for representation by A-1 Manufacturers' Agents to join our existing network. If you're a "live-wire" specialist in air conditioning and/or refrigeration, write, wire, call us—but hurry!

Drayer-Hanson—*(since 1910, key manufacturer of commercial/industrial air conditioning, refrigeration)*

Hi-Press—*(leader in Marine air conditioning, with unprecedented and proven new A/C concepts for land applications)*

Query Irv Secord, National Sales Manager, D-H DIV., HI-PRESS, 3301 Medford St., Los Angeles 63, or telephone: ANgelus 9-0321, Los Angeles... **better yet, see us at The Chicago Show, Booth #1172—spectacular new products to pace-set the sixties!**

d-h

drayer-hanson

DIVISION OF

HI-PRESS AIR CONDITIONING OF AMERICA, INC.

Previews

New Products To Be Featured In Many Exposition Exhibits Feb. 13-16

Temco

Temco, Inc., exhibiting in booth 621, 623, will be calling attention to a new gas wall furnace.

The furnace boasts three new features: controlled radiation by means of a specially-designed, built-in radiation shield; radiation to the sides as well as in front; and a new temperature control system.

Thermotank

Round and drum punkah louvers, mixing boxes for high velocity applications, and ventilated air and light troffers will be exhibited by Thermotank, Inc., in booth 761.

Warren Webster

Headliner in the booth (1138, 1140, 1142, 1144) of Warren Webster & Co., Inc., will be the firm's new five-model unit ventilator line and accessory equipment (storage cabinets, etc.) engineered specifically for school use.

Two unit ventilators will be shown — one for appearance and external examination, and one which will demonstrate internal working of the parts.

The company also will exhibit its "Newport," a heating-cooling conditioner; units of its "Walvector" line, a fin-tube radiation product; its "Riviera" product, another form of heating-cooling conditioner; various elements of its steam specialty line; Baseboard Radiation, fin-tube, "Tru-Perimeter Heating," mostly for residential application; and a full line of water, steam, gas, and electric unit heaters.

Commercial Filters

The exhibit of Commercial Filters Corp. in booth 411 will be largely devoted to a technical and general display of "Fulflo" filters and "Honeycomb" filter tubes for fuel and gases.

Featured will be a new sintered 316 stainless steel filter element adaptable to any CFC Fulflo filter. The Porous Metal Element is designed for the filtration of fluids with characteristics incompatible with ordinary filter media, particularly corrosive, high temperature and high viscosity fluids.

Watts Regulator

Feature section of the three-part booth (224) of Watts Regulator Co. will be devoted to an animated display of a hot water heating system.

Main purpose of this display is to focus attention on the Watts Type 1000 circulator and the firm's complete line of accessories for hydronic systems. The Type 1000 features unitized construction "which results in an extremely quiet, compact product," according to the company. A cut-open model will be on exhibit.

Another portion of the Watts booth will be devoted to the new FHA requirements covering safety devices for plumbing and heating systems. The company also will display photographs of its expanded factory facilities and machines.

Field Control Div.

In booth 732, Field Control Div., Conco Engineering Works, Inc., will exhibit six types of controls for heating and processing equipment from a 6-in. minimum size through 32-in. maximum size.

The firm, whose controls cover all three fuels—coal, oil, and gas—will emphasize its complete line of controls for gas-fired equipment.

Also featured will be the company's larger M+MG2 unit which is shipped from the plant as a single-acting control for coal or oil-fired equipment and covers sizing to breeching and flue pipes from 10 through 32-in. size. This control "can be very easily converted to a double-acting control to relieve pressures or down drafts," it was pointed out.

Metalbestos Div.

Gas vent pipe and fittings and the new "Metalbestos Chimney" will be displayed by the Metalbestos Div., William Wallace Co., in booth 409.

One of the mobile units in the display will allow the observer to check the new chimney housings which are flexible sufficiently to allow for 62 combinations, according to the company. Special emphasis will be placed on the firm's starting assembly which is claimed to be a unique development in the chimney field.

Browning Mfg. Co.

Mechanical power transmission components will be shown by Browning Mfg. Co. in booth 607.

New items offered by the firm include MVP multiple groove variable speed sheaves through 6 "C" grooves, from stock; MVP companion sheaves; and "358" sheaves and gripbelts. Among other products of the company are fixed bore and bushed type fixed pitch FHP sheaves, fixed bore and bushed type variable pitch FHP sheaves, single and double groove; fixed pitch multiple sheaves; and a wide belt drive line.

Lima Register

Two new grilles, two dampers, a register, and a competitively-priced diffuser will be introduced and featured by Lima Register Co. in booth 1168.

Lima's new Series 10V multi-valve sidewall register can be used with combination heating-and-cooling systems. Lima will preview new round and square knob-operated ceiling diffuser dampers. Its new grille is the 18H Series. The ½-in. louvers on 18H grilles are curved to eliminate whistling. Also to be shown is a new filter grille.

Royal Mfg. Co.

Spotlighted in the booth (N-437) of Royal Mfg. Co. will be the Royal "Moist-Aire" humidifier designed for any forced air heating system.

The unit is operated and controlled by the furnace blower driven air. The circulating air turns the turbo-fan pump which lifts water to the top of the evaporators. The water then runs down the outside of the evaporators in full contact with the moving air.

Westinghouse

New products for both commercial and residential applications will be featured in the Westinghouse exhibit.

The exhibit in booth 955 will include the company's new PKB water chiller, a complete residential system, a number of remote heat pump models, and a new wall-mounted heat pump (HB-18A) that operates quietly and is designed for economical central air conditioning installation, it was reported.

Van-Packer

Van-Packer Co., division of The Flintkote Co., will exhibit in booth N-424 its model HT stack "accentuating low cost, long life, and little or no maintenance."

The model HT stack features a new insulated thimble and new flashing and counterflashing, "components which have earned a new Underwriters' Laboratories, Inc. listing, with reduced clearances to combustibles at the roof," according to the company.

Southwest Mfg. Co.

Three new items in the 1961 "Heatwave" line will be highlighted by Southwest Mfg. Co.

The newest addition to the line includes three models of oil-fired, forced-air furnaces: high-boy, horizontal, and counterflow. Also new are Heatwave's electric furnaces of forced air type. These units incorporate an evaporator cooling coil for initial installation or the coil may be added on later.

Heat pumps in sizes ranging from 2 through 5 tons will be introduced in both remote and package types. The Heatwave booth (608-610) will be highlighted by a display centered around gas-fired high-boy units with recessed coil housing.

Condensation Engineering Corp.

Condensation Engineering Corp. will be telling show visitors to booth N-421 about its prefabricated chimney with concealed raincap and a stainless steel tank at the top of the chimney.

"The 'Vitroliner Chimney' has no exposed parts to catch soot that can wash off and streak the chimney housing and the roof in the rain," the company pointed out. "The stainless steel top tank collects and evaporates moisture at the top. This also prevents rain and moisture running down the inside of the chimney."

General Electric

Automatic residential controls, motors, and contactors and starters will constitute the major portion of the General Electric exhibit in booth 736, 740, 744.

Residential controls will include master controls, flame detectors, warm air limit controls, thermostats, fan and limit controls, and transformer relays.

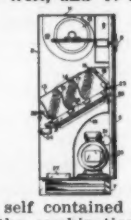
A complete line of fractional horsepower motors for industrial, commercial and residential heating, ventilating, and air conditioning applications will be shown. New 30 and 40 ampere contactors and starters that have just been added to G-E's line of air conditioning controls will also be exhibited.

AGENTS WANTED
BY
GOVERNAIR CORPORATION
See W. L. Hunt
BOOTH 507
HEATING & AIR CONDITIONING EXPOSITION

PATENTS

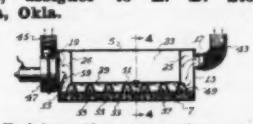
Week of Nov. 8 (Concluded)

2,959,031. SELF-CONTAINED AIR CONDITIONING UNITS. Harold H. Hopkinson, Syracuse, Maurice D. Irwin, De Witt, and V. R. Kessler.



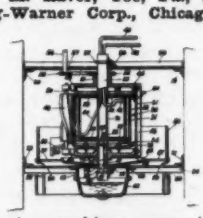
1. In a self contained air conditioning unit, the combination of a casing, means for inducing air through said casing in an upward direction, air intake means for said casing, an evaporator in said casing substantially traversing said upwardly directed air stream, said evaporator comprising a plurality of baffles constructed and arranged in the casing at an angle with the upwardly directed air stream. . . .

2,959,032. APPARATUS FOR COOLING AIR. Floyd L. Davis, Tulsa, Okla., assignor to L. D. Stewart, Tulsa, Okla.



4. Refrigeration apparatus comprising a container having spaced end walls, side walls and upper and lower walls and having an inlet adjacent one end wall and an outlet adjacent the other end wall, an air-pervious wick member disposed in a sinuous configuration between the upper and lower walls and extending substantially full width between the side walls and contacting each of the upper and lower walls along a plurality of spaced parallel lines disposed transversely of the length of the container. . . .

2,959,033. ICE MAKING MACHINES. Francis M. Raver, Yoe, Pa., assignor to Borg-Warner Corp., Chicago, Ill.

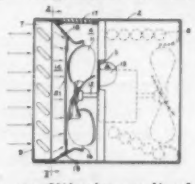


1. In ice making apparatus, the combination of a vertical, stationary, substantially cylindrical ice forming element; stationary means for supplying water to be frozen on said ice forming element; means for distributing water to be frozen over the outer surface of said ice forming element in the form of a traveling curtain comprising, a discontinuous, substantially circular, water delivering trough mounted for rotation above said ice forming element. . . .

2,959,034. APPARATUS FOR CHILLING FOODSTUFFS AND THE LIKE FOR STORAGE AND SHIPMENT. Willard L. Morrison, Lake Forest, Ill., assignor, by mesne assignments, to Liquefreeze Co., Inc., New York, N. Y.

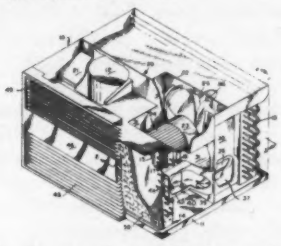
1. Means for supplying a cold boiling liquid to an insulated chill box which is apertured for loading including, a liquid pervious absorption pad closing said aperture, a removable cover for the container independent of and above the pad, means for supplying a cold boiling liquid to the pad to saturate it with resultant flow of liquid from the pad across the surfaces of the contents of the container, means for positively withdrawing gas evolved in the container through the pad in counter current constant direct contact with the liquid in the pad. . . .

2,959,035. AIR CONDITIONING APPARATUS. Robert J. Payton, Louisville, Ky., assignor to General Electric Co., a corporation of New York.



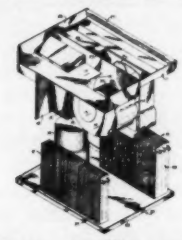
An air conditioning unit of the self-contained type comprising a casing adapted to be mounted in an outer wall of an enclosure, a refrigeration system in said casing including at least one heat exchanger, a fan in said casing for circulating a stream of air through said heat exchanger and said casing, said fan being positioned a distance no greater than 8 inches downstream from said heat exchanger. . . .

2,959,036. AIR CONDITIONING APPARATUS. John Richard Mehalick, Fayetteville, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



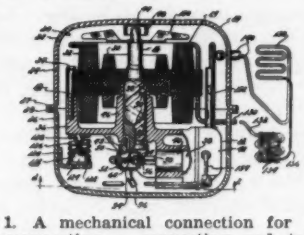
1. In an air conditioning unit including a casing having a partition defining a condenser chamber and an evaporator chamber; a refrigeration system in said casing including an evaporator in said evaporator chamber and a condenser in said condenser chamber; an evaporator fan for drawing air from a first source to be supplied with conditioned air into the evaporator chamber, into contact with said evaporator to cool the air, said fan being operative to discharge the cooled air to the first source; and a fan for directing air from a second source, separate from the source being cooled. . . .

2,959,037. AIR CONDITIONING UNIT CONSTRUCTION. John Richard Mehalick, Fayetteville, and Howard James Tyler, Syracuse, N. Y., assignors to Carrier Corp., Syracuse, N. Y.



1. An air handling system sub-assembly for use in an air conditioning unit, said sub-assembly comprising a partition panel adapted to divide said unit into a condenser compartment and an evaporator compartment; a fan motor mounted on said panel. . . .

2,959,063. REFRIGERATING APPARATUS CONNECTING ROD ASSEMBLY. Ralph W. Doeg, Detroit, Mich., assignor to American Motors Corp., Detroit, Mich.



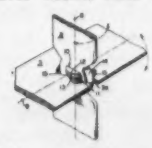
1. A mechanical connection for interconnecting a connecting rod to a crankshaft comprising a sleeve rotatable on said crankshaft, a connecting rod having a bearing section extending around a portion of the circumference of said sleeve, resilient means extending around the remaining portion of the circumference of said sleeve and having its ends secured to said connecting rod. . . .

2,959,116. AIR DIFFUSER. Cortland N. O'Day, Port Washington, and George J. Sweeney, Manhasset, N. Y., assignors to Air Devices, Inc., New York, N. Y.

1. An elongated air distributing device comprising elongated upper and lower frames having inturned flanges, and a plurality of elongated air directing vane members on elongated metal strips, each of said vane members being an oblique portion upstruck from said elongated metal strips, said vane members being positioned between said upper and lower frames to form a plurality of laterally extending superimposed narrow air channels. . . .

2,959,117. LOUVER ASSEMBLY. Jay L. Wright and Oscar C. Melgaard, Phoenix, Ariz., assignors to Wright Mfg. Co., Phoenix, Ariz.

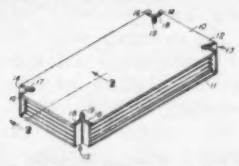
1. A louver grill assembly comprising a frame; a plurality of first spaced parallel louver vanes, each vane pivot-



ally mounted on said frame on a first axis; a plurality of second spaced parallel louver vanes, said second vane

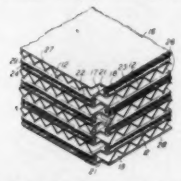
pivotally mounted on said frame on a second axis which intersects at least one first axis in a common plane; each of said first vanes having an arcuate shaped edge portion within the confines of the edge portions of each said first vane generated from the point where its said first axis intersects a said second axis. . . .

2,959,400. PRIME SURFACE HEAT EXCHANGER WITH DIMPLED SHEETS. Clyde S. Simpelaar, Racine, Wis., assignor to Modine Mfg. Co., Racine, Wis.



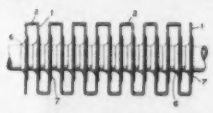
1. In a heat exchanger of the type consisting of layers of rectangular sheets bonded together at their edges and adaptable to be attached to headers or the like, the invention comprising said sheets each having an aligned opening extending transversely therethrough at the corners of said sheets, the boundaries on opposite sides of said aligned openings being defined by sheet edges diametrically oppositely disposed to face each other and present a substantially enclosed opening in each of said sheets. . . .

2,959,401. PLATE-FIN TYPE HEAT EXCHANGER AND METHOD OF MAKING THE SAME. James C. Burton, Racine, Wis., assignor to Modine Mfg. Co., Racine, Wis.



9. A plate-fin type of heat exchanger comprising a plurality of plates disposed in parallel relation with every two plates having every two sides along one side of the exchanger arcuately curved toward each other to contact each other and terminate in ends directed back toward and spaced from the remainders of said two plates and form a seam at the line of contact, said sides and said remainders having a space therebetween to admit fluid pressure to the interior of the arcs of said sides for urging said arcs into expansion and thereby enhance the seal at said seam. . . .

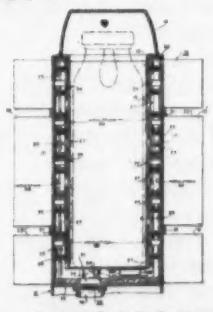
2,959,402. HEAT TRANSFER UNIT. Ray C. Edwards, Pompton Plains, N. J. (Ski Trail Smoke Rise, Kinnelon-Butler, N. J.)



1. A heat transfer fin for finned tubes formed of a strip of thin metal bent to form a plurality of spaced parallel fin forming sections and connecting sections connecting the fin forming sections at alternate ends to provide a substantially zigzag fin structure, said strip of thin metal provided with a line of spaced slits extending transversely across the strip at each line of juncture between a fin forming section and its connecting section. . . .

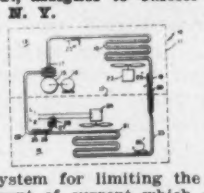
Week of Nov. 15

2,959,925. THERMOELECTRIC HEATING AND COOLING. Edsel W. Prantti, Robert S. Lackey, and Jack D. Meess, Pittsburgh, Pa., assignors to Westinghouse Electric Corp., East Pittsburgh, Pa.



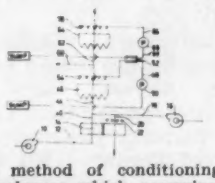
1. In a thermoelectric heat pump, a heat absorbing structure, a heat dissipating structure disposed in spaced relation to said heat absorbing structure, a plurality of elements of dissimilar thermoelectric materials disposed between said structure, dissimilar ones of said elements being alternately arranged, a plurality of spaced conducting members arranged in thermal transfer relationship with said heat absorbing structure and connecting adjacent ends of pairs of dissimilar elements. . . .

2,959,929. REFRIGERATION SYSTEM HAVING AIR FLOW VARYING MEANS. William L. McGrath, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



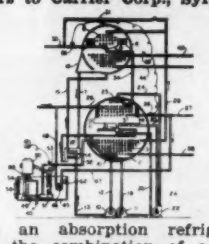
1. A system for limiting the maximum amount of current which can be drawn by an air conditioner comprising a compressor, a condenser, an evaporator, and an expansion member coupled between said evaporator and condenser, a motor coupled to said compressor. . . .

2,959,930. AIR CONDITIONING SYSTEMS. Carl Georg Munters, Danderydsvagen 3, Danderyd, Stockholm, Sweden.



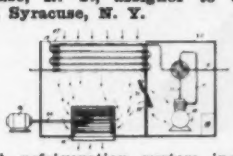
1. The method of conditioning air for an enclosure which comprises removing sensible heat from a mixture of enclosure air and outdoor air by passing said mixture through a heat exchanger in non-hygroscopic contact with a cooled liquid, said mixture first having been dehumidified by moisture exchange with outdoor air, passing a portion of the cooled dehumidified air mixture through an evaporative cooler to cool a stream of liquid while passing the remainder of the cooled and dried air into the enclosure and utilizing the thus cooled liquid to effectuate the removal of sensible heat from the air mixture in the heat exchanger. . . .

2,959,931. ABSORPTION REFRIGERATION SYSTEMS AND METHODS OF OPERATING THE SAME. Louis H. Leonard, Jr., East Syracuse, N. Y., assignors to Carrier Corp., Syracuse.



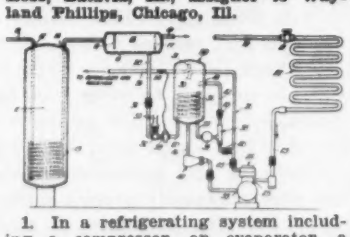
1. In an absorption refrigeration system, the combination of a generator, a condenser, a shell containing an evaporator and an absorber, the absorber being placed in the shell below the evaporator to permit vapor to flow downward to be absorbed by solution in the absorber, the absorber including a plurality of closely packed tubes through which cooling medium is passed in heat exchange relation with solution and vapor exteriorly of the tubes and a solution sump placed beneath the tubes. . . .

2,959,933. AIR CONDITIONING APPARATUS. Edward J. Burke, North Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



5. A refrigeration system including a compressor, a first heat transfer coil, a second heat transfer coil connected to form a circuit for the flow of refrigerant, means for reversing refrigerant flow in a portion of the circuit to interchange the function of the heat transfer coils, a compartmented housing accommodating one of said coils and the compressor. . . .

2,959,934. OIL SEPARATOR AND RETURN APPARATUS. Robert R. Ross, Batavia, Ill., assignor to Wayland Phillips, Chicago, Ill.



1. In a refrigerating system including a compressor, an evaporator, a liquid refrigerant feed line and a high pressure gaseous refrigerant line, the combination with a first oil separator in the liquid line, of a second oil separator in the high pressure gaseous refrigerant line, an outlet pipe connecting with the liquid line separator for draining an oil-refrigerant mixture from said first separator, said outlet pipe having connection with the high pressure gaseous refrigerant line upstream of the second separator. . . .

(To Be Continued)

American-Standard Industrial Div. Names J. P. Soule

DETROIT — Appointment of John P. Soule as product manager, terminal air conditioning, has been announced by John F. Tobin, vice president, marketing for American-Standard Industrial Div.

J. P. Soule

Soule will be responsible for product development and marketing in the terminal air conditioning systems area.

Soule joined the Plumbing & Heating Div. of American-Standard in 1951. In 1956, he was made manager, commercial heating and cooling systems, and later manager of hydronic air conditioning, the position he held at the time of his new appointment.

Bonded Hermetic In New Quarters

BROOKLYN — Samuel J. Strauss of Bonded Hermetic Re-Mfg. Co., Inc., has announced the purchase of the Unger Lock & Key factory at 9833 Ditmas Ave. here to be converted to a plant for the rebuilding of sealed units for the trade.

"We will be able to increase our production plus take in complete refrigeration and air conditioning equipment for rebuilding," Strauss said.

"This new location is in the industrial area of Brooklyn, easily accessible from Long Island, New York City, and Westchester, with plenty of parking space in our private loading area."

The firm expected to be completely set up in the new location by Feb. 1. Original location was 608 Coney Island Ave.

Irv. Secord Returns To Drayer-Hanson

LOS ANGELES—Irv. Secord, for several years national sales manager of Drayer-Hanson until joining Hi-Press Air Conditioning of America, Inc., in New York City last spring, has returned to Drayer-Hanson under a complete reorganizational setup, it is announced by S. W. Brown, Hi-Press president.

I. B. Secord

On Dec. 15 last, the two firms merged, with Drayer becoming a division of Hi-Press.

Brown has indicated Secord's new post in the combined operation will be that of national sales manager for the total Drayer-Hanson domestic and foreign operation and, additionally, national sales manager for the diversification and adaptation of Hi-Press small-pipe, high velocity marine air conditioning systems to land application—a program now under way.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

SALESMAN—WARM air heating and air conditioning—residential, commercial, light industrial. Technical training plus 15 years' general sales background. Experienced in selling quality equipment and custom duct fabrication to architects, builders and homeowners. Age 45, family man, excellent references, relocation 250 mile area of New York City. BOX A6713, Air Conditioning, Heating & Refrigeration News.

POSITION DESIRED by sales manager seeking greater opportunity. Thoroughly experienced in heating, air conditioning, sheet metal, and refrigeration at dealer, wholesaler, and manufacturing level. Would like position as sales representative, district manager, or sales manager in far Western area. For detailed resume, write BOX A6714, Air Conditioning, Heating & Refrigeration News.

MECHANICAL ENGINEER. Age 37, single status, 13 years' diversified experience domestic and foreign including project and application engineering, sales, installation and service; competent administrator, extensive knowledge of and strong interest in world trade; fair Spanish some Arabic. Available immediately. For resume and photo please write BOX A6716, Air Conditioning, Heating & Refrigeration News.

REFRIGERATION AND air conditioning installation and service mechanic, 20 years' experience on York, Carrier, Westinghouse, chillers, ice machines, low temperature equipment; age 47, married with three children, complete set of tools and equipment, wants year around job in the Los Angeles area. Contact BOX A6717, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

ENGINEER-SUPERVISOR: Expansion requires project engineer. Contracting firm, commercial, industrial air conditioning refrigeration. Complete, current experience required in design, contract expediting and field supervision. Engineering background—prefer minimum 7 years' experience. Send resume and starting salary requirements: D. B. Ervin, AIR CONDITIONING INC., 2001 Kettner Blvd., San Diego, Calif.

DISTRICT MANAGER qualified in engineered machinery refrigeration and air conditioning sales and contracting. Salary plus incentive compensation commensurate with job responsibilities. Excellent opportunity for advancement with growing Canadian company. Contact R. S. Rose, General Manager, CANADIAN ICE MACHINE COMPANY, Refrigeration Division, 65 Villiers Street, Toronto, Ontario, Canada, manufacturers and distributors of York products throughout Canada for over 48 years.

MANUFACTURERS' REPRESENTATIVES wanted—calling on refrigeration companies, store fixture houses, restaurant supply and chain stores; for states other than Ohio, Michigan, Kentucky, Indiana, West Virginia, and Tennessee; to sell a complete line of competitively priced metal and wood walk-in refrigerators. Write to LOUISVILLE COOLER MANUFACTURING COMPANY, 325 W. Main St., Louisville 2, Kentucky.

MANUFACTURERS' REPRESENTATIVES wanted Northern New Jersey Long Island. Manufacturer of heat transfer equipment, air conditioning, H & V, commercial & industrial coils, evaporative condensers, cooling towers, air washers & sprayed dehumidifiers, seeks qualified representatives for these two exclusive territories. MARLO COIL COMPANY, 122 East 42nd Street, New York City.

MANUFACTURERS' REPRESENTATIVE—To handle plant growth environmental chamber — who understands refrigeration and air conditioning. To sell universities, chemical industries, research stations. Contact Mr. C. L. Perkins, Morrison Hotel, Chicago, Feb. 13 thru 16th or PERCIVAL REFRIGERATION & MFG. INC., Boone, Iowa.

PERFECTION, DIVISION of Hupp Corporation, due to expansion has openings for experienced heating and air conditioning district managers. This man must have a good knowledge of warm air heating, air conditioning and heat pumps. Experienced in sales to distributors. Anyone qualifying is invited to submit resume to PERFECTION, Division of Hupp Corporation, 1135 Ivanhoe Road, Cleveland 10, Ohio, or to personally contact P. H. GAUTHIER or C. W. MILLSOM at the Palmer House, or at Booth 1002 during the ASHRAE Show.

SALES ENGINEER — Saginaw, Bay City and Midland area to cover Northern part of Michigan representing a line of major air conditioning equipment. All replies confidential. BOX A6703, Air Conditioning, Heating & Refrigeration News.

EXCELLENT OPPORTUNITY for graduate engineer to join staff of long established heat transfer surface manufacturer. Must have minimum of three years' experience in design of air conditioning, refrigeration, heating components. Located in the South. Please submit complete resume with letter to BOX A6708, Air Conditioning, Heating & Refrigeration News.

SERVICEMAN TO cover, Philadelphia area. Must be capable of supervision of installations, as well as emergency service of systems. Your home is your office. Send resume, salary desired, when ready to start work for a progressive organization. BOX A6715, Air Conditioning, Heating & Refrigeration News.

WANTED: AGENT of 15 years' experience, top qualifications, interested in broad line of cooling towers; industrial line of fans to include roof exhausters, blowers, propeller (AMCA) Territory Alabama & Georgia. BOX A6718, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

BRAND NEW icemaker pump motor and impeller repair kits for Scotsman Carrier $18.00 at Kesco wholesalers coast to coast. Bronze replacement icemaker pumps for York Carrier $29.95. Hose connection adaptors for York Carrier $1.00. Complete line condensate pumps from 10" to 50" head, 115-208-230 volts. Catalog. KESCO, Jamaica 13, N. Y.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

TOOLS, DIES, molds and fixtures to manufacture complete line of room air conditioners in ¾, 1, 1½ and 2 h.p. for sale at fraction of original cost. Including engineering and technical data, blueprints for all purchase and manufactured parts, time studies, etc. BOX A6711, Air Conditioning, Heating & Refrigeration News.

BUSINESS OPPORTUNITIES

SEEKING AGGRESSIVE agents as manufacturers' representatives. Territories in Midwest, South ready for immediate development. Agents should be calling on air conditioning, heating distributors. In replying please describe territory, other lines handled. Our products form complete line of air conditioning chemical maintenance. WORTH CHEMICAL PRODUCTS COMPANY, Box 366, Fort Worth, Texas.

PRODUCTS WANTED — Manufacturer of refrigerated and heated specialties seeks to add products and diversify. Will buy inventions for cash or on a purchase/royalty basis. Sales force and promotion available to take over distribution of products as sales agent or will buy company outright. Outline what you offer. BOX A6709, Air Conditioning, Heating & Refrigeration News.

DESIRABLE COMMERCIAL refrigeration, sales & service, business in North Central Florida. Two employees and serviceman owner at present. Very good opportunity for expansion. Desirable franchises, etc. For information and terms write BOX A6712, Air Conditioning, Heating & Refrigeration News.

THE MASTER SERVICE MANUALS - - -

— — — and other books of the Refrigeration Library are depended upon as textbooks in trade schools from coast to coast

BUSINESS NEWS PUBLISHING CO., DETROIT

FOR SERVICING, this new Westinghouse heat pump has a single aluminum back panel which can be removed. All moving parts, are accessible from outside the house. Holding the removable panel is Joseph Cerny, residential products manager for the company's air conditioning division, Staunton, Va.

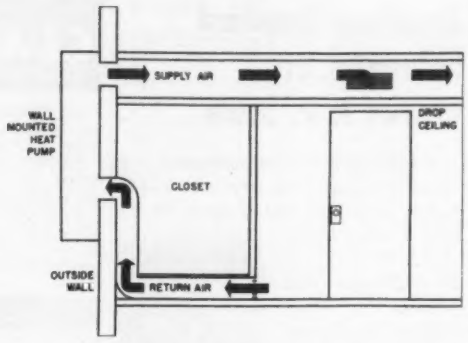


DIAGRAM shows how the new Westinghouse heat pump can be mounted on the outside wall of a closet at the end of a hallway. The space above a drop ceiling extends the length of the hallway and serves as supply air duct. Grilles open from this "duct" into individual rooms.

Westinghouse--

(Continued from Page 1, Col. 2)

Angeles have proven this heat pump's effectiveness," he added.

"One contractor placed the cost of the unit plus installation at approximately $495 for a ranch style home of concrete block construction. For this home, the heat pump was mounted on an outer wall adjacent to a clothes closet. Ductwork carries the cooled (or heated) air to a drop ceiling in the center hall. The return duct was located at the bottom of the closet."

Mild Weather Heating

Joseph Cerny, residential products manager for the division, emphasized that the new product offers quiet, high-quality central system cooling, and also provides mild-weather heating.

"Each unit will serve a house with 1,000 sq ft of area, but for larger homes, two units may be applied with one supplying the living-dining-kitchen area and the other for the bedroom-bathroom areas," Cerny said.

"The heat pumps may also be used in multi-storied dwellings with one unit serving each floor level. Installation is possible from a balcony, porch or garage roof. One unique method is to mount the heat pump on a hinged panel similar to a door, which is kept closed and locked when the unit is in operation. Opening the door into the room permits installation and maintenance.

Unit Weighs 230 Lbs

"Cabinet of the heat pump projects about the same distance from a wall as the overhang of the average roof," Cerny continued. "Brackets which are a part of the unit support it. Weight of the unit is 230 lbs.

"For a home of block construction, only two blocks need be removed for installation purposes. Air flows into the home through the upper opening with a minimum of ductwork required, and returns to the unit through the lower opening."

A similar installation can be made with wood frame, brick veneer or other forms of construction, he added.

Built into the unit is a thermostat that the householder adjusts by reaching just inside the return opening. When more than one heat pump is used, individual thermostats provide zone control of air conditioning in the separate areas, Cerny declared.

Bryant--

(Continued from Page 1, Col. 4)

aged cast iron boilers with thermal pins, and domestic hot water coils.

All-welded furnace casings with new, quieter steel burners.

Direct-drive cooling blowers.

A new line of duct heaters with blower packages.

Large-size unit heaters — 250,000 and 300,000 Btu, with a compact 25,000 Btu unit heater in the offing.

A new glass-lined water heater with a five-year warranty.

Distributors, regional sales managers, and branch managers from across the country gathered on the Gold Coast for the four-day meetings and inspected Bryant's 1961 lines.

The group was addressed by Bryant's president, Samuel F. Shawhan, who reported considerable company growth during the past year.

He ventured a generally optimistic forecast for 1961, based on increased demand for Bryant products and an across-the-board strengthening of its distributor and branch field sales force.

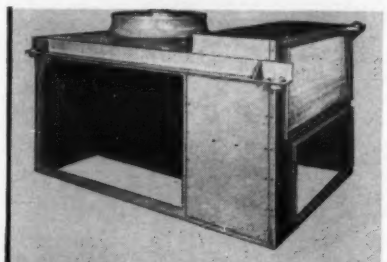
Outlining the massive advertising and publicity campaign for the coming year, Shawhan said that Bryant will spend over a million dollars promoting its products.

"We expect that the 1961 market will continue to be highly competitive, yet sensitive to quality to a degree our industry has not encountered for several years," Shawhan said.

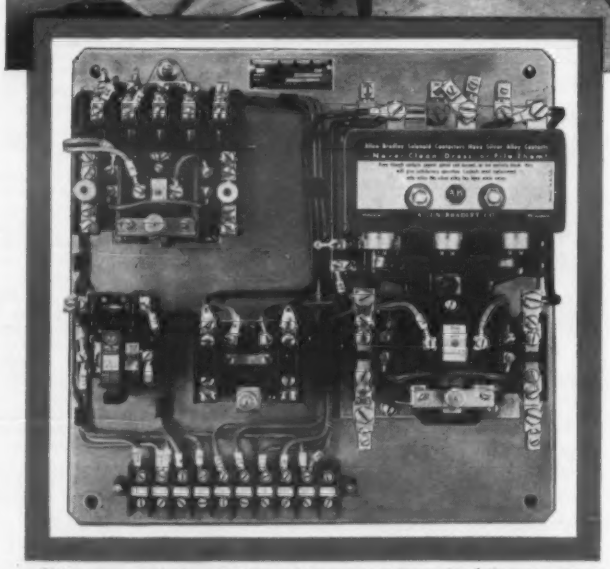
"We expect a continuing increase in the demand for all of our products as a result of the outstanding success of Bryant's absorption gas air conditioner," he added.

Allen-Bradley Control

for the Air Conditioners on North Western's New Bi-Level Commuter Cars



Two of these 8-ton Trane self-contained units provide the air conditioning for each of the 152 new commuter cars on the Chicago & North Western Railway.



This compact A-B control panel is used with each of the air conditioning units. All components are standard A-B catalog items.

Where "Quality" Counts!

A prime objective in the design of these modern cars was to minimize maintenance. It was only logical, therefore, to use Allen-Bradley — the *quality* motor control — for the air conditioning units.

The Allen-Bradley solenoid starter is famous for its simplicity. There is only ONE moving part — and this fact assures *millions* of trouble free operations. There are no bearings to corrode and stick — no flexible jumpers to wear and break. Also, the double break, silver alloy contacts — used throughout the A-B line — *never* need servicing. All A-B starters have reliable and permanently accurate overload relays that effectively protect motors against burnouts.

For the ultimate in maintenance free service through the years, insist on Allen-Bradley *quality* motor control.

ALLEN-BRADLEY

Member of NEMA

Quality Motor Control

Allen-Bradley Co., 1313 S. First Street, Milwaukee 4, Wis. • In Canada: Allen-Bradley Canada Ltd., Galt, Ont.